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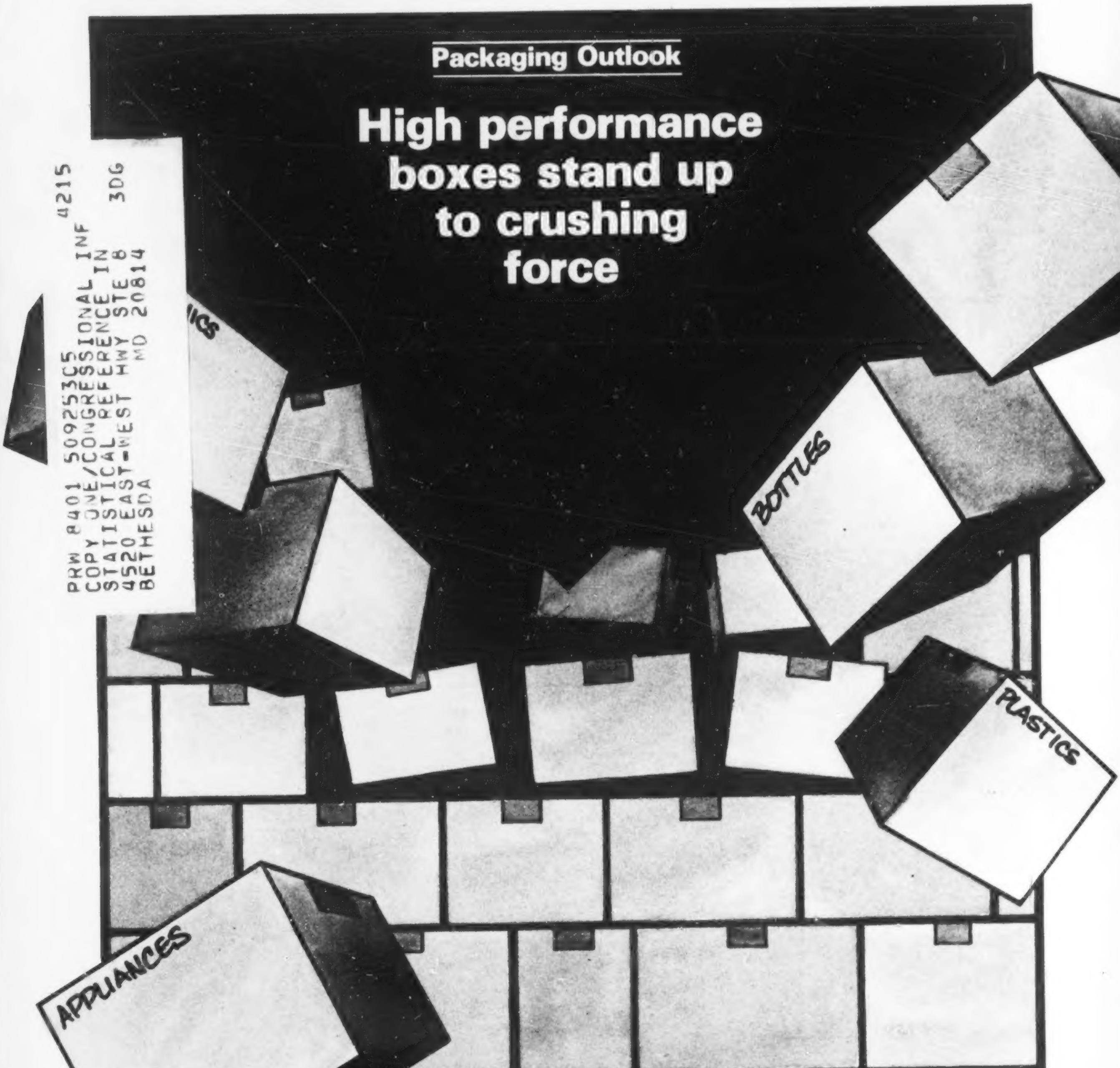

Packaging Outlook

High performance boxes stand up to crushing force

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MRO buyers are getting tougher

Lotus 1-2-3 aids make/buy decision

Users keen on EDI, seek new applications

PurchasingWorld

Helping you manage the business of buying

November 1986 Vol. 30 No. 11

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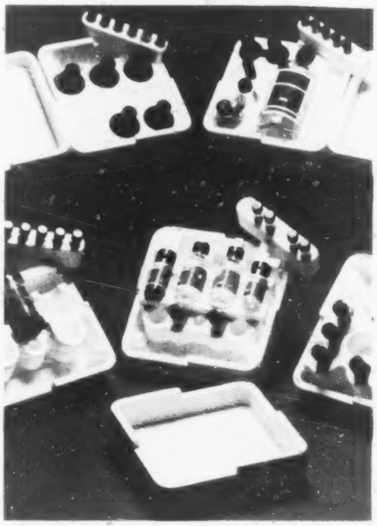

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PW PREDICTS

Robert S. Reichard, executive editor

Inflation jitters unwarranted

Prices have edged up a bit, service costs continue to outpace the general inflation rate, and the dollar remains weak (thus helping to lift import tags). But these factors alone will not bring any radical change. More important price determinants pointing to controlled inflation include:

- **Lingering capacity excesses:** The economy is operating well below its non-inflationary potential. The average factory use rate is 6-7% under the 85% level that usually signals the beginning of supply problems. And new capacity continues to increase. Real growth could probably run at 5% a year for five years before the economy runs into "demand-pull" inflation.
- **Relatively small cost increases:** New surveys indicate that 1987 pay hikes may actually fall fractionally under the current year. And unit labor cost increases are likely to hold at 2-3% for at least another 12 months. Raw material tags are being held down by a global glut while the cost of money continues to fall.
- **Continuing supplier price restraint:** Fewer manufacturers are now talking about new price boosts, as illustrated by a Dun & Bradstreet survey of producers' 4Q expectations.

Some of the inflationary forces being cited by worrymongers may be less potent than commonly supposed. Energy is a case in point. At this stage, any extrapolation of recent oil price increases has to be questionable. Most energy analysts think that crude oil will just hold on to recent gains.

Too much has been made of recent increases in precious metals. The runup appears unrelated to inflationary fears. The real reasons: turmoil in South Africa (the Free World's biggest producer) and increased consumption.

All the talk about the weak dollar and its effect on prices may also be exaggerated. That's because the traditional measures of dollar deterioration do not take into account countries where there has been little or no movement in basic exchange rates.

In addition, these yardsticks have fixed weights based on trade patterns that existed anywhere from 6-14 years ago. One new measure, which corrects for these "mistakes", finds that the actual decline in the dollar's value since early last year comes to only 6%.

Fears of a new food price runup also seem unjustified. To be sure, declines in this sector are about over. While meat prices are likely to rise somewhat in the near future, the still-enormous overhang of grain supplies will prevent any sizable increase in food price averages. Econometric models project only a modest 3-4% increase for next year.

This doesn't mean that we'll see a repeat of the price declines of early summer. It does mean that the underlying rate of inflation is somewhere in the 2-4% range.

Electronics prices

Look for relatively subdued electronics industry demand to spill over into 1987 and 1988.

Analysts at Gnostic Concepts, a California-based market research firm, say that lackluster performance can be traced back to a combination of factors including sluggish business investment, unstable profits, and the negative impact of the new tax reform bill.

Real (constant dollar) output of finished electronic equipment will rise only 7% this year—and maybe 9% in 1987. This won't be nearly enough, says Gnostic, to permit more than a 1% increase in prices next year.

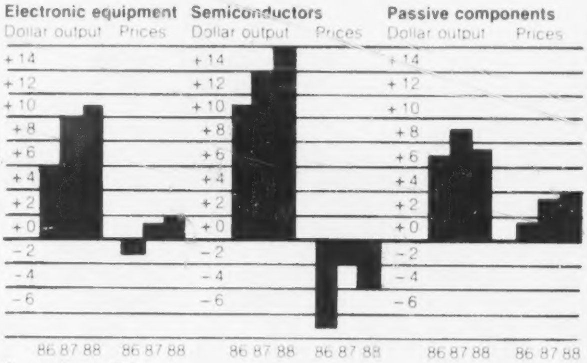
And 1988 won't be much better for the industry. Another relatively small 9% real gain will be accompanied by only about a 2% price advance.

Gnostic's projections for the electronics component sector are akin to the equipment sector—only relatively modest real demand advances for this once-booming sector, reflecting both the fewer components needed in equipment and inventory belt tightening.

Real gains in semiconductors should be only in the 16% range next year—and will rise to only 20% in 1988. But this won't be enough to shore up prices—tags are expected to fall 2% and 4% in 1987 and 1988.

The demand picture for passive components isn't all that bullish either. This less volatile sector will show advances of only 6% in 1987 and 3.5% in 1988. Prices here will be a bit stronger than in semiconductors. Average increases for 1987 and 1988 are projected at 3% and 4%.

Electronic market trends



Source: Gnostic Concepts

PW PREDICTS

Lead

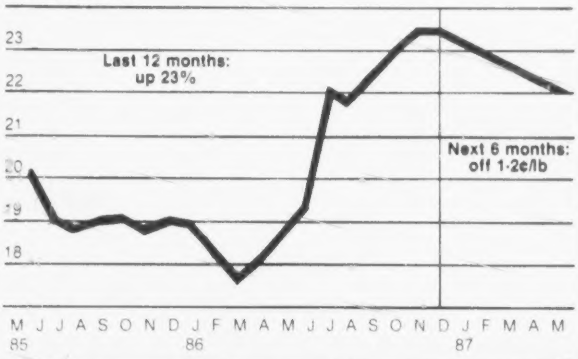
CURRENT SITUATION: Good price recovery here. The current price of about 25¢/lb is up from under 18¢/lb this past winter. Chalk it up to secondary plant shutdowns, tightness in concentrates, mine strikes, and the current seasonal demand push from battery makers. **Another sign of firmness: falling inventories.** U.S. refinery stocks are down to near 80,000 tons—off 37,000 tons since June 1. A similar trend is noted abroad where rising LME tags have risen 2¢/lb this year.

DEMAND: Even with the seasonal push, domestic consumption is not likely to top last year's 1.15 million tons by much because of the phaseout of leaded gasoline which will offset the small increase in battery use. This gain is being kept low by the increased use of longer-life, reduced-lead-content batteries. **Don't look for any dramatic changes in the near future.** Average growth for the next five years will be a meager 1% per year.

SUPPLY: Current snugness may ease as global production returns to more normal levels and demand falls off seasonally by early 1987. There's plenty of secondary capacity around. Reassuring news for the future: The U.S. reserve base is estimated at 27 million tons—a 50-year supply at the current 500,000 ton/year domestic primary production rate.

PRICE OUTLOOK: Another penny or two increase cannot be ruled out over the next month or so—but tags would still be under earlier peaks. Moreover, this firming should be short-lived—some easing is likely in early 1987 as the supply situation improves. **Price declines should be modest—*PW* equations show a low 20s quote by next spring.** This is high enough to keep most of the industry at or above the break even point.

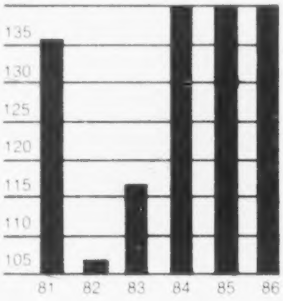
Lead
(Cents per pound)



Magnesium

Don't rule out as much as a 5% price decline by early next year as supplies continue to exceed demand. And the glut could grow as increased Canadian capacity is added in 1987. U.S. metal consumption for 1986 is expected to remain relatively unchanged at last year's 140,000 ton level. Long-term demand is also far from bullish—any increases by the auto industry will be offset by reduced alloy use because of the more intensive recycling of aluminum cans.

Magnesium demand
(000 tons)



Steel

Prices continue to firm, reflecting supply interruptions stemming from the USX strike. Another $15-20/ton sheet increase is scheduled for early January. Hikes were also being posted recently on tin mill products and carbon plate. But tags could fall off once labor problems are resolved. Also on the bearish side: Overall domestic shipments remain quite disappointing. Expect only about a 69-70 million-ton year in 1986. Consumption is following suit—with only a 90 million ton chewup expected this year and an even smaller 86-87 million ton reading likely for 1987.

Telephone switches

Cut-throat competition along with sharp discounting has hit the industry. Reductions have run as high as 10-20%. Behind the precipitous slide: cost-cutting technological advances, heightened Japanese competition, and determination on the part of giants like AT&T, GTE, and the regional telephone companies to hold onto market share. On the latter score, the fiercest competition revolves around "targeted" customers that these big sellers consider crucial. In any case, the big price-cutting spree does seem to presage a shakeout—with perhaps more than half the 30-40 suppliers in the business eventually falling by the wayside.

Low-density polyethylene

Don't count on the newly posted 5¢/lb boost holding. A 1¢ hike may stick—bringing market quotes for the bellwether liner grade into the 26-27¢/lb range. But that's about it. Reasons: 1) Inventories remain high, 2) the increase is far greater than that projected for the plastic's key feedstock (ethylene), and 3) disappointing demand. On the latter score, only about a 0.5% increase is projected for this year —well under the 4.5% rates of the 1983-85 period. Look for about a 3% rise next year—not even enough to offset the 3.5% increase in production potential expected.

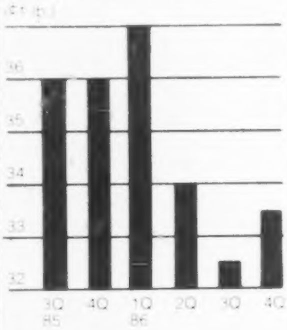
Aluminum

Tags remain on the shaky side because of oversupply and lack of customer demand. Especially weak are common alloy sheet and market ingot (now only in the mid-50s range). Low Third World production costs and fairly stable energy bills are also putting a lid on tags. Then, too, the recent declines in producer stocks seem to have bottomed out. Upshot: continued price easiness into early 1987—with ingot hard-pressed to reach even the 60¢/lb level any time soon.

Polypropylene

Figure on another few cents being added onto the going price—with quotes on the key homopolymer grade likely to settle in the 33-34¢/lb range. Good exports are helping this firming trend along—as year-to-date outgoing shipments run more than 30% above year-ago levels. Other firming factors include 1) rising feedstock costs, 2) an expected 7% increase in overall shipments this year, and 3) a 90%+ operating rate. This volume plastic is also likely to remain strong in 1987. Watch for an even bigger 8% demand jump that will push utilization rates up in the mid-90s range.

Polypropylene price



Homopolymer grade

Industrial valves

Shipments will drop some 2% under 1985 levels—to only $2.31 billion. And little change is expected in 1987 as capital spending in the energy sector remains sluggish. Best showings will be for 1) bronze and corrosion-resistant gate, globe, and check valves, and 2) fall, plug, and all other automated types. But shipments of steel gate, globe, and check valves could drop. Imports are also putting pressure on the domestic industry—incoming shipments this year are running 25% over 1985 levels. Price hikes, in the meantime, should also remain small—with metal valves (excluding fluid power) expected to advance by only about 2% next year.

Zinc

Bullishness is still the order of the day here—with some sellers recently quoting as much as 47¢/lb

Energy

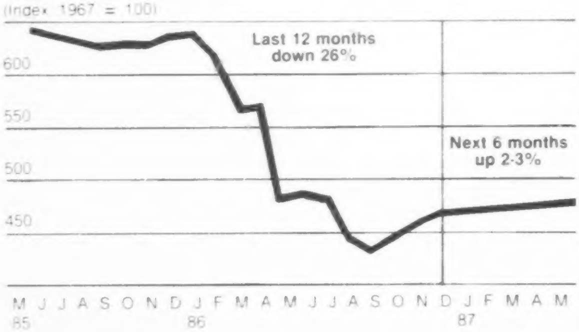
CURRENT SITUATION: Price advances have been modest. Imported crude is still below the $11-13 barrier —half what it was a year ago. Overall energy tags have risen only about 5% since summer—that's 25% under late 1985 readings. With data for most of 1986 in, **consumption will probably show only a 1-1.5% advance, though oil alone could end up with as much as 3%.**

DEMAND: Expect the sluggish pattern of 1986 to continue throughout 1987. The main restraints: slow economic growth and energy conservation. The increase in oil use in 1987 should fall to only 0.5% as utility consumption drops off. Expect these consumption advances for 1987: coal up 2.9% vs. 0.1% in 1986, natural gas up 2.3% vs. -4% this year, and electricity up 3.2% vs. 1.2% this year. Overall energy use will increase by 2.2% vs. 1.2% this year.

SUPPLY: No sweat. Another oil glut can't be ruled out if OPEC members cheat on production quotas. **And there's still more non-OPEC oil coming on stream.** Natural gas looks easy, too with this country estimated to have 3 tcf excess capacity—not counting the Canadian supply. Coal is similar and a good percentage of capacity remains shuttered. Despite a slowdown in utility investment, **there should be enough generating capacity to meet the estimated demand increase of 3%** + in 1987.

PRICE OUTLOOK: Much depends on crude oil tags. Assume a gradual rise in imported crude to $14 bbl by mid-1987 and $15/bbl by the end of the year. Aggregate fuel and power costs could be up 2-3% by mid-1987, with an equal rise in the last half. By late 1987, specific prices should line up as follows: Gasoline $1.03/gal (+16%), utility coal $1.65/million BTU (+1%), utility natural gas $2.90/million BTU (+15%), and residential electricity $8.09/kwh (+3%).

Energy prices



PW PREDICTS

Long-term steel outlook

Further demand declines, combined with still-strong competitive pressures, loom ahead over the next decade for the hard-pressed U.S. steel industry.

A new Chase Econometrics study projects that domestic chewup will shrink to only 89.5 million tons by 1995—off some 7% from last year's estimated levels. Moreover, some product lines such as tin mill products and cold-rolled sheet could decline more than 20%.

There is one exception: an expected 27% jump in demand in galvanized sheet and strip by 1995. This product will displace cold-rolled sheet, especially in the auto sector, as Detroit upgrades the quality of body panels and extends its corrosion-resistance warranties.

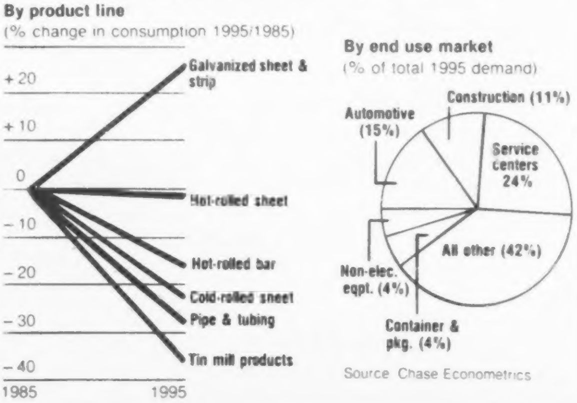
But the fact that so much galvanized steelmaking capacity is being built now suggests increasing competition. In all likelihood, says Chase, auto manufacturers will be able to increase their pressure on the steel industry for lower prices and higher quality.

Also under severe competitive pressure are tin mill products which are expected to lose almost half their markets by 1995. Behind this bleak forecast is the increased use of plastics, aluminum, and asceptic packaging—a market dominated by tin until recently.

Chase analysts also see:

- further U.S. capacity reductions to 96 million tonnes by 1995,
- fewer integrated mills and more mini-mills,
- real price declines for commodity steel products,
- higher steel imports from Brazil, South Korea and other newly industrializing nations,
- a gradual loss of the U.S. steelworker pay premium over both domestic manufacturing and foreign steel workers, and
- declining steel imports through 1988—and then a gradual buildup again starting as early as 1989.

A long look ahead at steel demand



Source: Chase Econometrics

for the metal. Blame boosts on continuing Canadian strike problems. Demand, meantime, remains just so-so—with total slab zinc use so far this year barely keeping up with 1985. More important, the metal's No. 1 market (autos) could well fall off next year. Most forecasters, for example, see car sales dropping off by as much as 500,000 units in 1986. Multiply this by the 34.5 lb of zinc used in each car—and this could add up to a lot of metal.

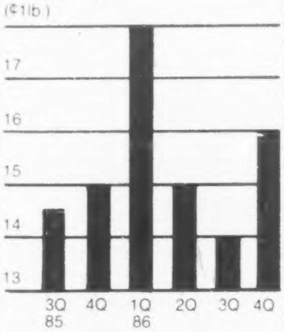
Lumber

Domestic consumption will hit a new peak (46.1 billion board feet) this year—on a combination of 1.8 million-plus housing starts and continued growth in repair and remodeling. But some decline (to 44.3 bbf) is seen for 1987—as housing starts slip a bit. Imports, however, will hold up near this year's estimated 15 bbf. These projections, in turn, suggest that the recent relative strength in prices (some softwood tags are up more than 5% from 1985 levels) will begin to erode. Some buyers see prices down as much as 3-5% by late winter or early spring.

Petrochemicals

The picture is mixed here. Producers are attempting to boost both ethylene and propylene. But butadiene continues to be soft. Ethylene suppliers are shooting for a new 2¢/lb gain to near 16¢/lb—on top of the 0.5-1¢/lb price-boost posted just a month or two ago. A similar 2¢/lb price-boosting attempt is also being made for propylene. On the other hand, butadiene has dropped further (into the 11.5¢/lb range)—on a combination of increased domestic production and cheap imports.

Ethylene



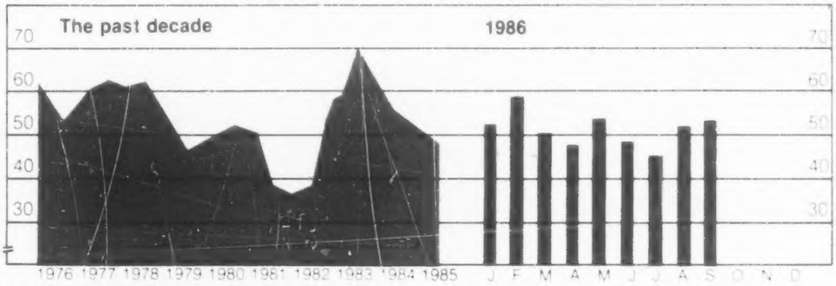
Copper

The red metal continues to bump along in the low-to-mid 60s price range. To be sure, visible stocks are at their lowest level in years (about 9 weeks at current consumption rates). But there is a perception of abundant metal—and that continues to press down on prices. Two other price-rise inhibitors: 1) expected declines in Chinese buying, and 2) reduced costs as new, lowered pay scales knock anywhere from 4-8¢/lb off domestic production tags. The latter can't be underestimated—it could encourage the reopening of domestic facilities—adding to supplies, thus putting a ceiling on any price recovery.

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators: employment, inventories, new orders, production, vendor performance



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Positives leading negatives

Economic fundamentals are still positive. While no big spurt seems in the offing, the trend should continue up through the end of the year and into 1987.

One encouraging sign is the renewed vigor of the N.A.P.M. Business Barometer. After languishing in the negative (under 50) zone for several months in the early part of this year, it is now well into the plus zone (see chart).

Beyond general yardsticks, there are plenty of specific business indicators that seem to be pointing to better days ahead. This is certainly true of interest rates where the prime borrowing cost is expected to hold in the relatively low 7.5% range—two points below what it was a year ago.

Everything else being equal, this has to give buying a shot in the arm. Take a look at how bargain-basement financing has stimulated domestically manufactured car sales. In September, sales ran at 12.3 million annual rate—up nearly three million from the previous month.

Another good sign: continuing low level of business stocks. This is especially true in durable purchased materials where the stock-sales ratio remains at a very low 0.47—10% under last year's reading.

All this is in sharp contrast to the trend in this indicator in comparable stages of business upturns. Reasons for the change this time around are better controls, ready availability of most items, and relatively high inventory carrying costs.

And this doesn't exhaust the list of signs indicating there is still life in the now 4-year-old business advance. The absence of inflation cannot be ignored and the outlook is for continued moderation for at least another year.

Even the trade deficit seems ready to peak out—with imports actually falling in recent months. No one expects miracles, but things should be getting better from here on out as the U.S.-foreign price gap narrows a bit.

The odds also suggest that the deficit will be less burdensome next year. In fact, it could even provide a little contribution to economic growth. Chase Econometrics, for one, sees the gap between imports and exports narrowing by about $13 billion in real terms. This means another $13 billion tacked onto the GNP.

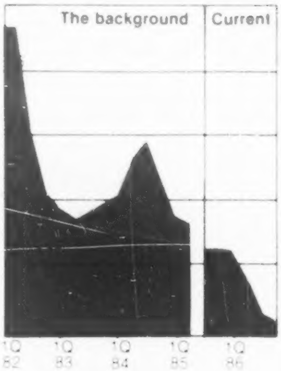
There are a few weak sectors to offset some of the encouraging signs. For one, the housing boom seems to be leveling off. Next year should be a good year, with about 1.7 million new units expected. But this would still be about 150,000 units under the probable 1986 total.

Also, capital equipment leaves a lot to be desired. Machine tool orders are a

Leading indicators

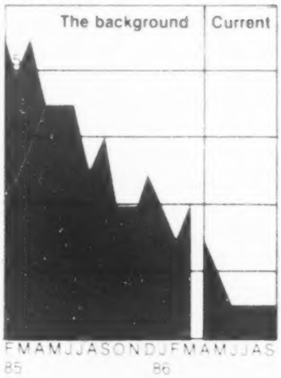
1. Prime interest rate

(Percent)



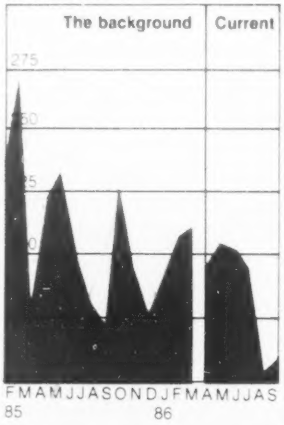
2. Stock/sales ratio

(Percent)



3. Machine tool orders

(Millions of dollars)



case in point. At latest report they were running some 10-15% under last year's levels.

And what's true for machine tools is also true for machinery as a whole. The non-defense capital goods orders are currently running about 5% under a year ago.

Most analysts agree that the overall economic picture is mixed, with both strong and weak spots, but with the strong spots showing a slight edge. A recent survey of 300 members of the National Association of Business Economists finds that most expect the expansion to keep rolling at least through 1987. On the other hand, they put real GNP gain over this period at only 3%—not that much better than this year's 2.5%.

On balance, things look good for scales

New electronic technology should keep demand for scales and weighing systems moving upward. But the gains won't be nearly as spectacular as in the 1970s when sales in constant dollars advanced at almost a 6.5% annual rate.

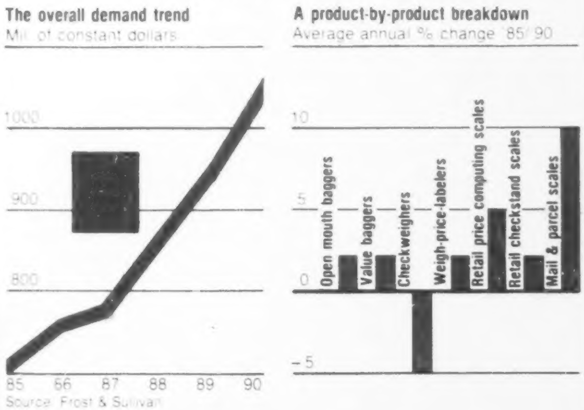
A new Frost & Sullivan study puts the average advance in the 3.5-4% range over the next five years. And much of the gains, they say, will result from the incorporation of additional features on existing product lines.

The biggest increases will be in mail and parcel scales, where built-in microprocessors have greatly simplified scale operation and have made it possible to integrate scales and postage meters.

These types already account for nearly 20% of all U.S. scale sales. Moreover, the proportion could grow as sales advance about 10% annually from 1985 to 1990.

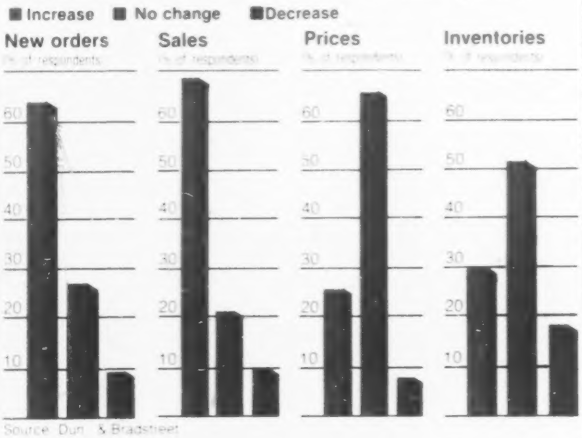
Another above-average growth market: retail price computing scales which already account for about 10% of the overall scale market. They are expected to advance at about 5% annually for the remainder of the decade.

How the scale market shapes up



Source: Frost & Sullivan

How manufacturers see the current quarter



Source: Dun & Bradstreet

Relatively small (2%) gains, however, loom ahead for such other types as open mouth baggers, valve baggers, weigh-price-labelers, and retail checkstand scales. And a few industrial scale types—such as bench, portable, floor and platform, motor truck, and conveyor models—will do little more than hold their own in the years immediately ahead.

Watch for imports, too—incoming shipments account for about 10% of the market (and nearly half come from Japan). But major penetration to date has only been in one area—delicatessen scales.

But whatever the source or type of scale, buyers will have their work cut out just to keep track of the rapidly changing technology. Many scales, for example, now provide features beyond simple indication of weight. Thus more and more models now 1) store commodity information, 2) compute total prices and mailing and shipping charges, 3) interface to drive printers and other peripheral equipment, and 4) transmit data to mainframe computers.

Still some cheer here

Business may be a bit on the sluggish side but no one seems ready to push the panic button yet. In fact, most of the nation's large firms remain quite optimistic—they are expecting some modest gains in the months ahead. The evidence here is quite conclusive.

- The results of the latest Conference Board survey of more than 1,000 business executives suggest a fairly upbeat outlook for the next six months. The consensus is that business over this period will be the same or even slightly better.
- A new Dun & Bradstreet survey reveals that more than 60% of the respondents are looking for an increase in both new orders and sales over the current quarter—com-

pared to the 10% who fear some falloffs (see chart).

The D&B survey also has some optimistic findings on prices. Specifically, only 26% of queried manufacturers see 4Q 1986 prices topping last year's levels. That's five percentage points under three months ago. And 2Q figures were off by 9%.

Inventories should also remain firm. The 30% who see increases are pretty much balanced by another 18% who are planning on declines.

Another upbeat note: Employment is expected to continue inching ahead—as are net profits, with 63% of responding manufacturers projecting a rise for the current quarter.

Commenting on the overall findings, D&B's corporate economist, Joseph Duncan, notes that only the South Central states (the oil producing region) seem weaker. The rest of the country remains basically unchanged from the two preceding quarters.

This month's breakdown

	Latest level (Sept)	% change from: Month ago	Year ago
Bearings	256.9	0.0	0.9
Bolts, nuts, etc	277.6	-0.1	-0.1
Chemicals, inorganic	294.4	-0.2	-2.2
Chemicals, organic	321.7	0.3	-11.0
Concrete products	324.9	0.0	0.6
Corrugated cartons	272.3	2.0	2.2
Cutting tools, small	292.2	0.0	2.0
Electric lamps (bulbs)	344.6	-1.0	-0.6
Electronic components	202.9	0.2	2.7
Fans and blowers	365.8	0.1	1.7
Foundry and forge products	361.7	-0.1	-0.6
Fuel oil (residual)	417.6	15.7	-53.1
Furniture, commercial	318.4	0.1	2.1
Gasoline	338.6	9.0	-49.8
Glass, flat	232.5	-0.7	2.6
Glass containers	400.8	3.2	3.6
Gypsum products	338.4	-1.6	2.2
Hand tools	384.1	0.0	2.3
Hand tools, power driven	238.4	0.3	2.0
Industrial furnaces	395.8	0.2	2.4
Integrating and measuring instruments	237.4	0.4	2.3
Internal combustion engines	353.8	-0.1	1.7
Lubricating oil	368.3	-2.0	-2.7
Lumber millwork	322.1	0.1	2.7
Material handling equipment	297.1	0.1	0.7
Metal containers	362.5	0.0	1.3
Metal mill shapes (nonferrous)	301.0	0.1	-2.0
Metal tanks	297.2	-0.5	-2.6
Motors and generators	353.5	0.1	0.6
Motor trucks	294.9	-3.7	7.8
Office and store equipment	154.4	-1	0.5
Paperboard	276.8	1.0	4.1
Paper boxes and shipping containers	273.5	1.0	2.1
Paper office supplies	238.1	0.3	0.1
Paint	282.4	0.0	1.9
Plastic resins	291.8	-1.0	-4.4
Precision measuring tools	271.3	1.2	3.1
Pumps and compressors	363.3	0.2	1.9
Refractories	373.4	0.1	0.6
Rubber belts and belting	337.5	0.7	-1.7
Scales and balances	232.6	0.6	1.6
Steel products	348.9	0.2	-3.9
Switchgear	286.9	0.1	1.7
Textiles, synthetic fibers	149.4	-0.1	-3.6
Textiles, gray fabrics	150.2	-1.1	-0.1
Tires and tubes	234.0	0.2	-1.0
Transformers and power regulators	234.1	0.1	0.4
Welding equipment	304.1	-0.2	2.9
Wire and cable	205.6	0.1	-0.3

CURRENT PRICES

Trifling trends

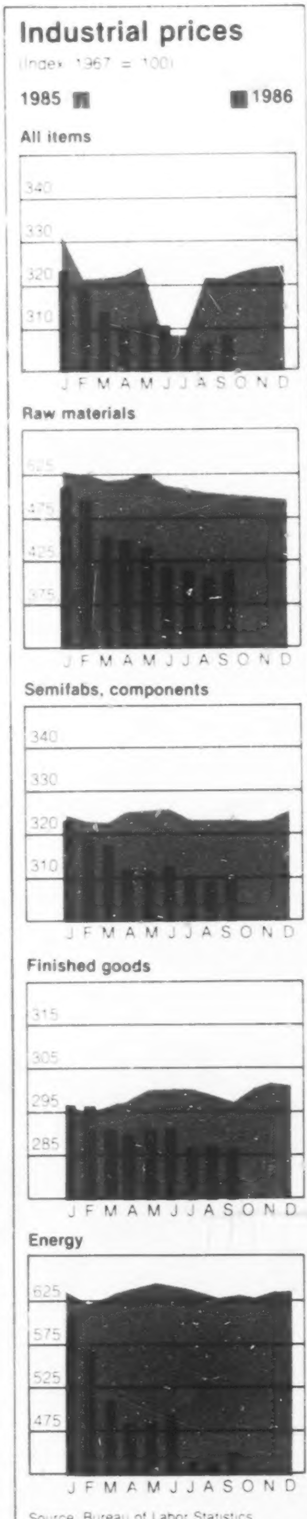
Industrial price averages are beginning to edge up. But the increase mostly reflects the delayed impact of recent boosts in OPEC crude oil rather than any underlying surge in inflationary pressures.

Subtract the overall fuel and power advance (up a hefty 3.6% over the latest month) and the increases in the remaining areas are negligible. In fact, more than half the 50 or so product lines regularly monitored by *PW* remain within 0.2% of where they were the previous month (see accompanying chart).

But in energy, big increases were reported in several key areas including crude oil, gasoline, home heating oil, diesel fuel, residual oil, and jet fuel. These far outweighed continuing softness in natural gas and liquid petroleum gas.

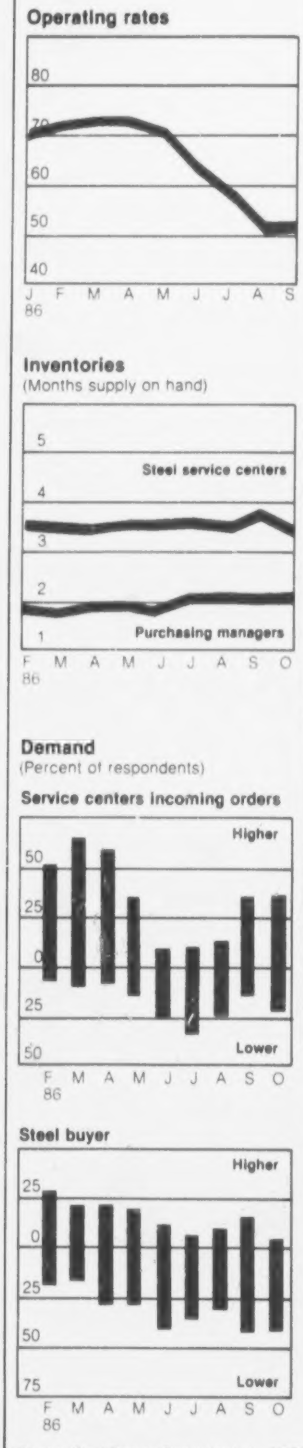
About the only other sector showing a meaningful increase was capital equipment—and even here the advance was a manageable 0.4%. Boosts in this sector hit packaging machinery, chemical industry machinery, and communications equipment. But some offset was provided by drops in railroad equipment, turbines, and oil field machinery.

Chemical and related products also remained on the soft side. New declines were reported in industrial chemicals, plastic resins, synthetic fibers, and inedi-



Source: Bureau of Labor Statistics

Steel



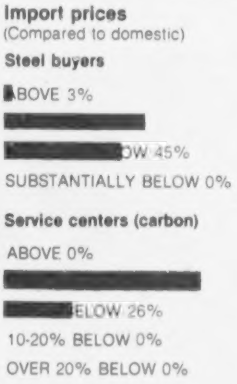
ble fats and oils. More important, preliminary data suggests that all of these areas will remain under pressure through the end of the year.

Metals also seem to be holding. Only precious metals were up because of the South African turmoil.

But base metals were a standoff, as modest increases in steel and lead were offset by continuing easiness in both aluminum and copper.

Building materials also showed a mixed pattern. Slippage in both gypsum and asphalt products was balanced by some inching ahead in softwood lumber and plywood. But the latter could well peak out and may even fall a bit in the months ahead because of the upcoming seasonal construction slowdown and a tailing off in housing starts.

New econometric models also forecast a non-inflationary near-term pattern. A spot check of several models shows about a 2-3% annual rate of rise in overall industrial tags through yearend and into early 1987.



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

Still bearish

Recent market reports suggest some seemingly contradictory trends: rising prices during a time of disappointing demand.

But buyers and steel service centers responding to new surveys say the price increases are solely due to the long USX work stoppage. While 37% of queried distributors expect to pay higher prices for inventory replacement over the next few months, they hasten to add that it's just temporary—and that tags will be softer again when the struck mills are back on stream.

Demand forecasts certainly seem to back up this longer-term "buyers' market" assessment. Most producers are talking of only a 69-70 million-ton shipment year in 1986—down 3-4 million tons from 1985 levels. And the consensus is that this could drop another few million tons in 1987.

The latest survey results, which look at the nearer term, are equally bearish. Some 37% of the distributors responding to the latest Steel Service Center Institute (SSCI) survey see some gains. But this is largely offset by another 23% who see some falloff.

Responding to this, SSCI president Andrew G. Sharkey predicts that service centers will have difficulty matching 1985's record pace. As he puts it, "Last year's fourth quarter was our strongest since 1985, but I don't look for a repeat. Some slippage in the months ahead could occur if auto production is cut back and commercial construction continues to lag."

Buyers looking at the fourth quarter provide a similar assessment. The N.A.P.M. Steel Buyer's Group finds that 42% of its respondents expect to cut back on purchases—far outweighing the 3% who expect increases.

While much of the above reflects sluggish consumption, blame can also be placed on continuing inventory retrenchment. Despite the fact that stock-sales ratios are already low, both service centers and buyers seem determined to push them even lower.

Some 49% of the buyers say that they will attempt to cut steel stocks over the next six months (vs. 6% who may add). Some 55% of service center respondents still feel that stocks are too high—again drowning out the 3% who think they are low.

If distributors do cut inventories more, it could mean spot shortages. Sharkey notes isolated problems ahead in certain items in specific sizes and gauges, particularly flat-rolled (including terne plate).

In the meantime, service centers are trying to fill any holes by trading among themselves because there is less spot material available on the docks and because imports are lower.

Buyers are also becoming a bit concerned because of the steel strike. Some expect problems in

BUSINESS DATATRAK

coated sheet and maybe in other types of sheet.

And foreign steel bargains seem a bit harder to find. While 45% of queried buyers say that they can still get price breaks, they say the advantage is "slight."

Service centers confirm this. In carbon steel, only 26% note some savings—less than one-third of those who reported savings in a March survey. In all cases the advantage is put in the low 6-10% range.

The only exception is in stainless, where 20% of service centers say they can get discounts of 11-20%. All the remaining distributors put the advantage in the 6-10% range.

One suprise—buyers are still counting on substantial import tonnages despite the smaller U.S.-overseas price gap. Sixteen percent actually expect to increase their dependence on foreign steel—not much less than the 23% who plan on cutting such shipments. This indicates that the drop in imports over the next several months will be relatively slight.

PROCUREMENT STATUS

Still easy after all these months

Despite some fall seasonal pickup and scattered strikes in steel and other areas, the availability picture is still good.

PurchasingWorld's exclusive leadtime index did move up one point above the neutral 50 mark, but this has been the seasonal pattern for several years. It actually indicates very little change in the underlying supply/demand situation.

A closer look at the product lines that make up this index tends to confirm this conclusion. More than 80% of the items tracked month-to-month show little or no change over the past six months. That's the most stable the index has been since *PW* first started tracking these products in 1978.

The N.A.P.M. speed-of-delivery yardstick tells the same story—with the 5% of buyers reporting faster service offsetting the 5% reporting slowdowns. As Robert J. Bretz, chairman of the N.A.P.M. Business Survey Committee puts it, "this indicates that while production is up, vendors are not finding it difficult to meet shipping requirements."

The absence of any items on the N.A.P.M. short-supply list (except titanium dioxide) also attests to the current lack of procurement problems. And that has been the situation for 20 months running.

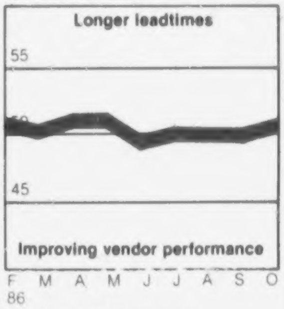
The under-80% average factory utilization rate is still another factor pointing to continued ease. This is unlikely to change over the next few quarters, as an expected 3% annual rate of gain in industrial production is offset by a 2.5% rate of increase in new production potential.

No wonder PMs are playing their inventory cards close to the vest. It is worth noting that N.A.P.M. figures show that more buyers have been reporting stock declines than additions for 25 consecutive months. This is one reason why the government's inventory-sales ratio for purchased durable materials (see chart) is at a new all-time low.

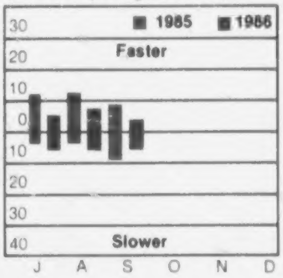
Monthly procurement status report

Leadtime index

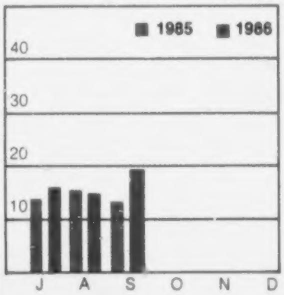
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



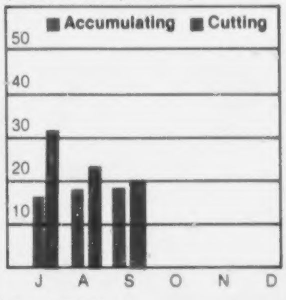
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Not too much change here. Typical weekly leads: motors (2-3), pipes, valves, and fittings (1-2), electrical material (1-3), integrated circuits (16-22), coal (2), film laminations (10-12), offset paper (6-8), PVC resins (2), c-r steel sheet (7-8), aluminum sheet (10-12), specialty copper sheet (3-7).

Cleveland: A slight tendency to stretchout, with these weekly leads: hardwood lumber (2-3), plywood (1-2), plastic packaging materials (4-6), and PVC resins (2-3). No appreciable change for alloying metals (on demand), waterproof paper (4-5), corrugated (2-3), and steel drums (on demand).

Los Angeles: Grey iron castings have come in two weeks (to 4-6). Other leads: galvanized steel (12-14), aluminum tubing (4-6), brass castings (8-10), domestic fasteners (6-8), stainless coil (12-14), electromechanical devices (6-8), standard bearings (20-24), standard valves (10-12), and linear ICs (30).

Houston: Little change here. Current weekly leads: high density polyethylene (4.5), polypropylene (4.5), corrugated (3.5), galvanized steel coils (16), steel fasteners (2), plastic bottles (6), shop fabricated carbon steel pipe (4-13), shop fabricated alloy pipe (8-22), and high-pressure heat exchangers (17-35).

Philadelphia: Steel and bronze valves have inched out two weeks (to 4). Waits for bearings vary from stock to six weeks for standard types and 12-14 weeks for specials. Fasteners run from stock to six weeks for standards and 8-10 weeks for specials. Standard pumps and valves are also 8-10. No change in electronic components or steel.

Pittsburgh: Manganese has come in from 4 to 2 weeks. And ton lots of tin have come in to 2 from 4 weeks. Other prevailing leads: all types of drums (1), plastic bags (3-4), corrugated and folding boxes (3-4), wirebound boxes (4-5), laminating papers (6-9), steel strapping (2-3), printed seals (3-5), and polypropylene and PVC (5-6).

Leadtimes (in weeks)

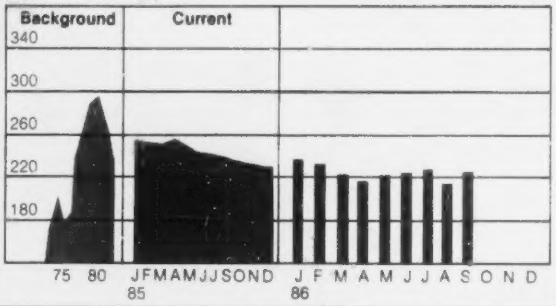
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	7½	7½	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	3½	3½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4	4	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	6½	6½	6
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	7	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14½	14½	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	9	11
Motors (Phil)	9	9	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	1½	1½
Plywood (Chgo)	3	3	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2	2	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	13
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	11	11	12
Brass Castings (LA)	9	9	5
Brass Rods (Chgo)	9	9	6½
Brass Sheet (Chgo)	5	5	4
Brass Tube (Chgo)	4	4	7
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	3	3	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	7	5
Fasteners, Std. (Phil)	3	2½	1½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

(Index: 1967 = 100)

Latest month 220.2
Month before 212.0
Year ago 238.0



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.25
Steel, plates, Pitts., cwt	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt	25.90	25.90	27.85
Steel, strip, C.R., Chi., cwt	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.555	.550	465
Antimony, N.Y., dealer, lb	1.12	1.07	1.29
Beryllium-copper, cost ingot, lb	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb	1.29	1.28	1.29
Brass, yellow, [sheet], lb	1.24	1.23	1.24
Cadmium, N.Y., dealer, lb	1.05	1.00	0.77
Copper, electrolytic, wire bars, refd., lb	.65	.64	.66
Copper sheet, over 24 in., lb	1.38	1.37	1.38
Lead, common, N.Y., lb	.24	.23	.19
Magnesium, pig ingot, [99.8%], lb	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl	178.00	182.00	315.00
Molybdenum, oxide, dealer, lb	3.15	3.00	2.90
Nickel, cathode, dealer, lb	1.79	1.82	2.10
Platinum, dealer, oz	604.00	621.00	315.00
Silver, N.Y., oz	5.71	5.70	6.03
Tin, N.Y., dealer, lb	2.58	2.57	5.59
Zinc, Prime West, East St. Louis, lb	.44	.44	.38
Zinc, die casting alloy, No. 3, lb	.505	.475	.445
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.25	16.34	16.18
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	580.00	580.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	320.00	310.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.218	.222	.257
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.030	.940	1.045
Cotton middling, 1", N.Y., lb.	.398	.330	.563
Printcloth, 48", 80x80, N.Y., spot. yd	.82	.74	.68
Army duck, 37", 13 oz., yd.	1.45	1.45	1.30
Blended printcloth, 64", 78x54, yd.	.78	75	.83
20s combed yarns	1.74	1.74	1.95
Wool 64s, Staple, lb.	1.90	1.90	2.03
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	455
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal.	.81	.80	1.35
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.255	.255	.280
Polypropylene, homopolymer grade (market price), lb.	.32	.32	.35
Polystyrene, general purpose grade (market price), lb.	.33	.33	.35
Polyvinyl chloride, pipe grade (market price), lb.	.275	.285	.260
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.22	.21	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	157.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.73	.69
Xylene tanks, gal.	.80	.80	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	332.65	324.85	318.35
Lumber 2x2 pine, mbf, cl	315.20	313.00	293.70
Plywood, plyform, ¾", msf, cl	592.90	591.25	584.00
Plywood, ⅝", msf, cl	390.10	385.55	381.55
Cement, bulk, ton, tl	63.43	63.35	64.91
Sand, ton, cl	6.62	6.62	6.36
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.96	44.83	48.00
Crushed stone, 1½", ton, cl	7.83	7.78	7.80
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.82	0.83	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	215.07	217.57	208.19
Brick, common, per thousand, tl	186.01	185.81	183.70
Asphalt paving, AC-20	136.19	144.97	176.69
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.36	7.21	7.14
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	11.00	11.00	21.40
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	14.75	14.75	29.50
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.360	.470	.775
Gasoline, 94 oct., reg., Chi., tank car, gal.	.415	.470	.754
Heating oil, No. 2, Chi., bulk, gal.	.411	.450	.805
Heating oil, No. 2, N.Y., bulk, gal.	.420	.463	.840
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.418	.410	.823
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.240	.245	.320
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	76.00	76.00	73.00
Steel, No. 1 hvy., dlvd., Chi., ton	70.00	72.00	71.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.55	.56	.58
Copper, No. 2, East, wholesale buy, dlvd., lb	.475	480	.480
Brass, red, East, wholesale buy, dlvd., lb.	.510	.520	.525
Brass, yellow, East, wholesale buy, dlvd., lb.	.31	.31	.33
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.340	.335	.300
Alum., mixed clip., E., wholesale buy, dlvd., lb	.360	.355	.325
Zinc, old, East, wholesale buy, dlvd., lb.	.17	.17	.11
Lead, clean solids, East, wholesale buy, dlvd., lb.	.14	.13	.10
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	28.00	25.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	23.00	20.00	8.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.09	.09	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.11	.11	.18

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

A peek at 1987 commodity prices is mostly reassuring

The first tentative 1987 commodity price forecasts are beginning to make the rounds. Of special interest to PW readers is one from William V. Doll, president of the Joint Purchasing Corporation (JPC), an organization that makes $125 million in annual purchases for health care and other service firms.

A preliminary look at 1987 commodity tags

Engineering & Housekeeping	**% change 87/86**
Paper products	4-7
Polyliners	8
Chemicals & cleaning prods.	5-6
Fuel oil	2-5
Utilities	5-10
Batteries & lamps	6-9
Plant maintenance supplies	6-9
Paint	5-8
Electrical	4-6
Plumbing	7
Office Supplies & Equipt.	
Fine paper	5-8
Furniture	6-8
Office forms	5-7
Forms	5-7
Office equipt.	6-8
Food	
Vegetables	Up to 10
Citrus juices	Up to 10
Beef	6
Soft drinks	6
Processed dairy products	5
Pork	5
Fish	5
Poultry	4
Eggs	2
Fruit	Down 3-8
Oil & shortening	Down 10
Noncitrus juices	Down 5

Source: Joint Purchasing Corporation

What Bill Doll is telling his clients is good news: No major price acceleration for the upcoming year.

In preparing this preliminary forecast for *PW*, Doll focuses only on items of interest to industrial buyers. (His more complete forecast will be featured in *PW* in the early part of next year).

Here is what he sees now for 1987:

- **Engineering and housekeeping products:** These are generally MRO items and run the gamut from batteries and electrical supplies to paper products and fuel oil. Virtually all of his projections are in the tolerable range—varying from a low 2-5% increase for fuel oil to an 8% increase for polyliners (see chart for details).

These boosts are somewhat bigger than those reported for the current year. But that's to be expected since oil tags will be level-to-slightly higher this time around—in sharp contrast to the big drop this past year.

This oil effect can't be underestimated in the MRO category. Doll points out that four of the ten items detailed in this sector are closely tied to crude petroleum—namely fuel oil, polyliners, chemicals and cleaning products, paint, and plant maintenance supplies. There's an added upward factor in polyliners: Resin replacement costs will be rising as current relatively cheap inventories are used up. Hence Doll's forecast for an 8% advance in 1987.

- **Office supplies:** Costs could accelerate a bit and, in certain areas such as paper and furniture, increases could run as high as 8%. These sectors are highly labor intensive and with wages continuing to rise, Doll thinks anything lower than this is unrealistic.

Elsewhere, forms and the cost of printing could increase by as much as 7% because of increases in the cost of producing paper, printing chemicals, and other related goods.

- **Food:** This category is included in the JPG rundown because many industrial PMs are responsible for purchasing food for their firm's inhouse cafeteria services. The picture here is somewhat mixed, with the drought in the Southeast this past summer expected to exert some upward pressure regionally. Forecasted increases are: citrus juices (10%), vegetables (10%), beef (6%), soft drinks (6%), poultry (4%), and eggs (2%). But heading lower will be cooking oil and shortening (as much as -10%) and fruit (-3-8%).

William V. Doll, president of the Joint Purchasing Corporation, New York City, has provided economic forecasts for members of JPC for the past ten years. He has been president of the New York Chapter of the National Association of Purchasing Management since June 1986. He is also co-founder of the Mid-Atlantic Group Network.

Doll says that the 1987 purchasing climate in general will be highly competitive and he suggests 1) getting as many bids as possible, and 2) putting increased emphasis on long-term contracts.

The Joint Purchasing Corporation chief also sees increased opportunities for price breaks for small and medium size buyers willing to band together to seek volume deals. With this in mind, Doll is beginning to look into ways his firm can do cooperative buying for industrial buyers, particularly in such areas as fuel oil, office equipment, and furniture.

He also adds this final note of caution: "My forecasts, while based on talks with top commodity analysts, buyers, and sellers, could be subject to some revision over the coming months. It will take until early next year before things really crystalize. This is especially true in the commodity areas we're dealing with—sectors where just a modest shift in supply, demand, or cost can cause a significant price swing."

For more information on the Joint Purchasing Corporation **Circle 264**

PW

Price hikes won't hurt much

Robert S. Reichard,
executive editor

Packaging price trends at a glance

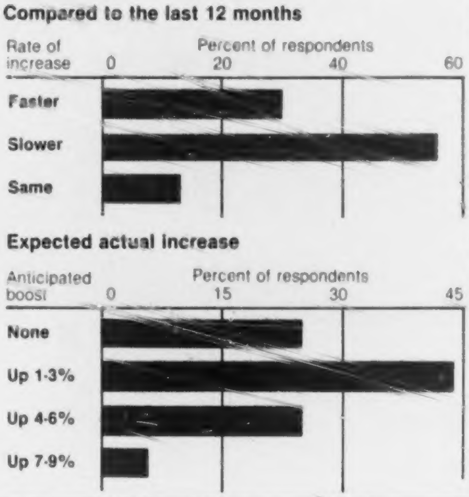
The past 12 months

(A detailed government rundown; % changes)

Corrugated	−2.8%
Glass containers	+3.2%
Metal containers	+1.2%
Wood containers	+0.3%
Gummed tape	+1.1%
Polyethylene bags	−2.0%
Shipping sacks & multiwall bags	+5.5%
Folding paperboard boxes	+0.9%
Setup paperboard boxes	+1.2%
Sanitary food containers	−0.2%
Fiber cans & drums	0%
Plastic bottles	+0.4%

The next 12 months

(A purchasing manager view)



Compared to the last 12 months

Expected actual increase

Source: Bureau of Labor Statistics, PurchasingWorld

Price boosts will be selective rather than across the board—small rather than large—in the months ahead, not a particularly bad scenario for packaging buyers.

But for suppliers of all kinds of packaging materials it will be a welcome departure from the past 12 months when advances were rare.

Here's how packaging buyers responding to a new ***PW*** survey see the next year shaping up:

- Three out of ten respondents anticipate some acceleration in overall packaging costs in the next 12 months. That's more than double the 13% who say they may actually do better than the current year as far as new price increases are concerned.
- While the exact amount of increase varies—depending on size of firm, product mix, and the amount of buying clout—the overall average advance is put at 2.5%, almost 1% more than noted over the past 12 months.
- The upward price trend will be aided by fairly brisk demand. Confirming this, three out of every ten respondents expect the physical volume of their packaging purchases to increase over the next year. Only two out of ten say that some cutbacks may be in order.

Wharton Econometrics puts the average jump in corrugated box tags at 2.2% next year. That's still a small jump, but it stands in marked contrast to the 4% average decline this year, a decline which is already beginning to reverse.

Wharton's forecast for metal containers also suggests a modest price pickup. Next year's average advance for cans, barrels, and drums is put at 2.5% (vs. only 1.3% during the current year). Only in glass containers is some deceleration suggested, as this year's estimated 3.3% increase slows down in 1987 to just about 2%.

Why the general increase in packaging prices? Buyers offer several explanations: 1) better demand; 2) supplier attempts to recoup 1985 and early 1986 price declines, especially in paper and plastics; 3) increasing prices of some raw materials—again mostly in the paper and plastics sectors.

As one East Coast packaging executive puts it: "It would be unrealistic to expect a repeat of the past few years. But I'm confident we can limit increases to the general inflation rate—and in some cases beat that rate a bit."

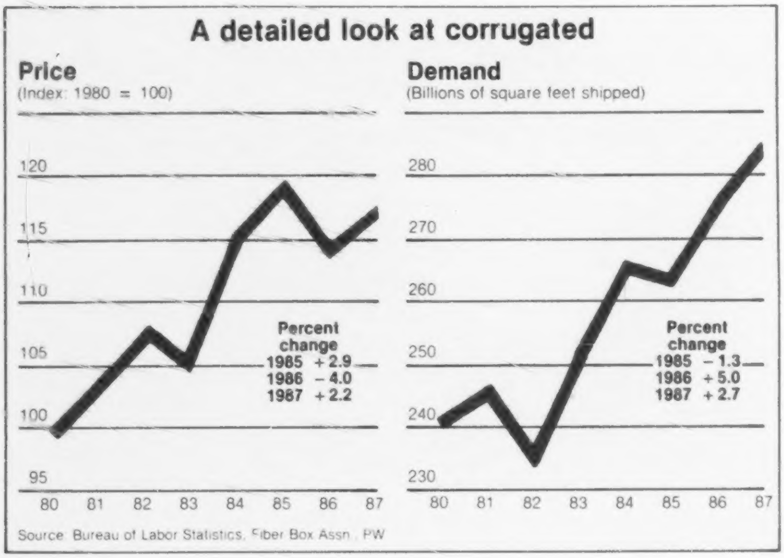
He and other buyers also stress the fact that increases differ substantially from company to company, industry to industry, and by geographical area. This is supported by our survey which shows a wide variation in price changes reported over the past year. Corrugated boxes, for example, increased from nearly zero to about 8%. And substantial price differentials were also noted in the metals and plastics areas.

Keeping this in mind, here's a thumbnail sketch of what buyers see ahead for 1987 in some of the more important packaging sectors:

- **Corrugated:** Nearly everyone agrees that this will be a good year for suppliers—at least in volume. Consensus is that the industry will ship 278 billion square feet by year-end. That's about 5% more than last year and a new all-time peak.

As for prices, converters have already been busy trying to pass along a $30/ton increase in linerboard, the basic raw material of corrugated. But their success to date has been mixed. Thus while a few buyers, as cited above, are paying as much as 8% more than they did earlier, others have so far managed to postpone or at least water down any increases.

And that's not the end of it. Some linerboard producers, for example, are talking about another $30/ton increase in linerboard prices (to



A detailed look at corrugated

Price (Index: 1980 = 100)

Demand (Billions of square feet shipped)

Source: Bureau of Labor Statistics, Fiber Box Assn., PW

$350/ton) by early next year. But many buyers doubt that this second boost in less than six months can hold up in the marketplace.

- **Folding cartons:** This sector has been weak for some time. But some attempts to boost prices are starting to appear. Not all have been successful. In fact, about half of the queried buyers still say they have managed to sidestep price hikes. The other half says they're paying about 3-5% more for cartons.

Solid bleached sulfite (SBS) and solid unbleached sulfite (SUS) have tended to be strongest. But even clay coated newsback, a weak sister until recently, is showing signs of moving up a bit.

- **Paper bags:** Supplies, although adequate, have tightened up somewhat. As for prices, the majority of queried buyers (three out of four) say they are paying somewhat more, with some reported increases over last year in the double-digit range.

- **Metal cans:** Little or no upward price movement has occurred or is expected to occur here. Yes, a new $15/ton tinplate price increase has been announced for January, but given the competitive aspects of the tinplate market, it's still not clear whether it can hold up.

Aluminum cans aren't all that buoyant, either. One point to keep in mind: A lot of people are building new aluminum can lines, and a surplus could develop within a year or so. Citing this and low basic aluminum prices, one buyer says he plans to press for lower aluminum can prices when his contracts come up for renegotiation at yearend.

- **Glass containers:** Price increases posted earlier this year have pushed averages close to 3.5% above a year ago. The major factor here has been tight availability because of recent plant shutdowns.

But prices seem to have leveled off in recent months—reflecting somewhat better market balance. Competition from plastics may also be a restraint here. In any case, very little price increase is expected over the next six months.

- **Plastic bottles:** This fast-growing sector could rack up as much as a 5-6% demand gain this year (to nearly 19 billion units). But prices so far have been fairly stable—reflecting strong competition, generally good supply-demand balance, and low basic resin costs. The latest official government index shows these bottles running only 0.5% above year-earlier levels.

However, some near-term increases can't be ruled out here as resin producers press for higher prices. Up until now, molders have been able to beat these back, but it is not certain that they will be able to continue to do so.

Even if they don't, any overall price increase for plastic bottles is likely to be modest. The basic raw material cost is still determined by crude oil and few experts expect any big increase here, even with the new OPEC production curbs.

This also shows up in projections for resin price increases next year. Most forecasters are calling for only a 3-4% overall plastic resin price increase—hardly enough to force big cost pass-throughs on the part of bottle makers.

Whatever the packaging material, buyers seem determined to hold the price line or, at the very least, keep increases moderate. Some of the techniques being tried include package redesign, use of thinner gauge materials, substitution of one material for another, more vendor participation in cost-cutting efforts, and, of course, hard-nosed bargaining.

Many buyers are also stressing combined purchases from several plants to build buying clout, increased standardization of packages, shifting more of the inventory burden over to suppliers, and extended price guarantees.

One PM tells of a cap he has in his contract which guarantees against any increases in corrugated prices through mid-1987.

The current situation is summed up by one Illinois-based purchasing executive who observes: "Packaging means big bucks for us these days. While we certainly don't want to strangle our suppliers, the feeling is that with a little astute purchasing and planning, we can get through the next year or so with little more than fractional cost increases."

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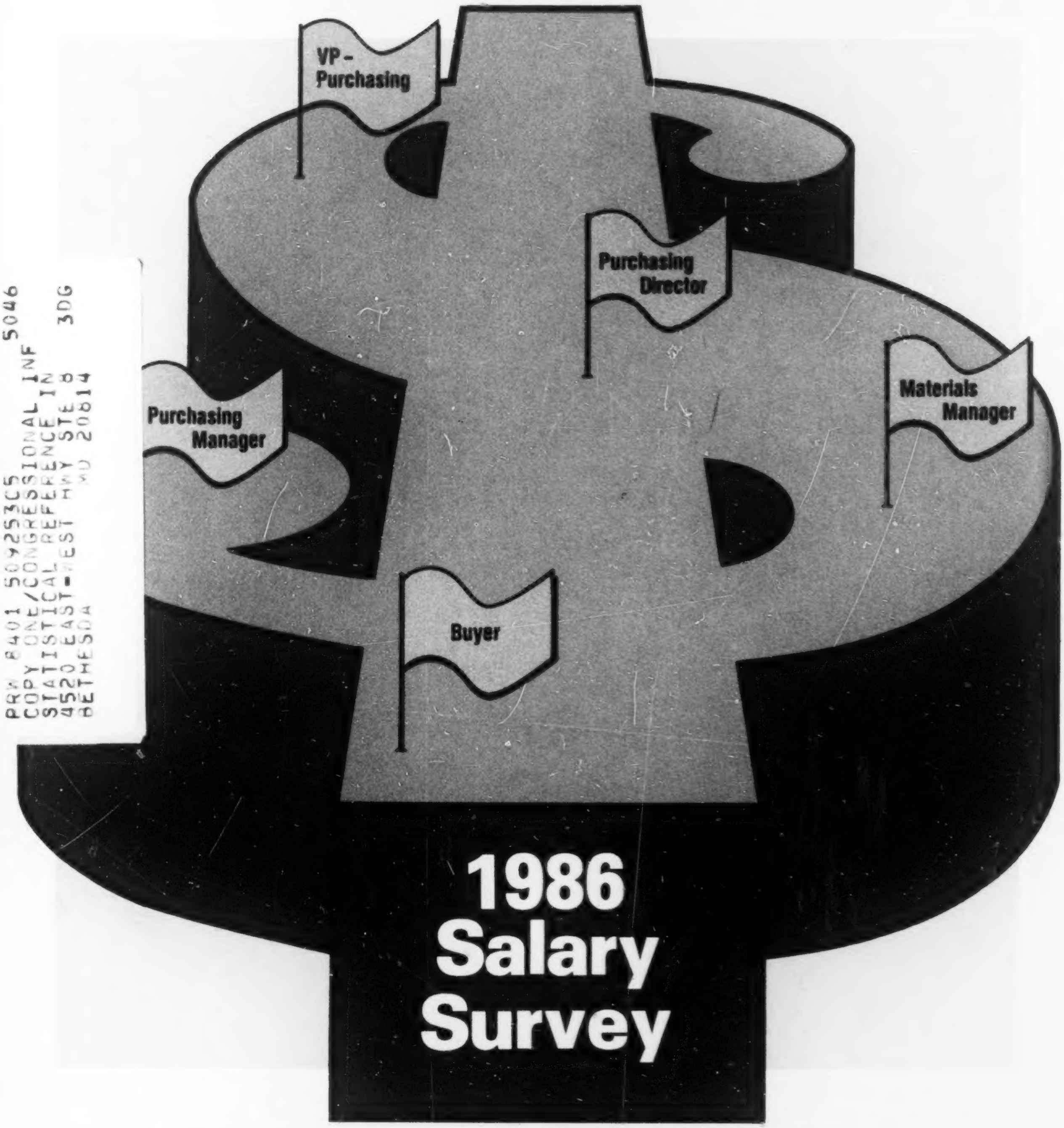
VP - Purchasing
Purchasing Director
Purchasing Manager
Materials Manager
Buyer

1986 Salary Survey

Is service industry buying that different?

Trucking toward a million-mile vehicle

1986 Buyer of the Year award winners

PurchasingWorld

Helping you manage the business of buying

December 1986 Vol. 30 No. 12

Special report: 1986 Salary Survey

33 Pull your pay stub and see how you're faring
Paychecks got fatter, job satisfaction increased, and 1987 should bring another 6% increase (on average) in salaries for purchasing professionals. That puts the three-year climb in PM compensation at 20%. These are some of the findings of *PurchasingWorld*'s new 1986 Salary Survey, which features a first-of-its-kind Job Description Survey of 12 titles (by function) in 22 industry groupings.

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PW PREDICTS

Robert S. Reichard, executive editor

Some price hikes are inevitable

Bigger price increases seem inevitable in the quarters immediately ahead. But these boosts, for the most part, should be modest.

The signs of change are obvious. Recent N.A.P.M. Business Survey Committee studies show that more buyers are now reporting price increases than decreases. At latest report, some 20% of survey respondents were noting boosts—the highest such figure in more than two years. More significant, the new figures represent a sharp turnaround from the previous year and a half when "declines" consistently ran ahead of "increases."

This shift, along with supply-demand-cost forecasts, may also help explain the slight 1987 increase now being predicted by *PurchasingWorld* readers. Procurement costs are expected to advance 3.4% next year—up a bit from the current year's extremely low 1.3% estimate.

Import pressures could be another important factor in the changing industrial procurement outlook. Tags on foreign-made products, reflecting the weaker dollar, have been moving up for over a year now. If you exclude shaky energy tags because they tend to distort overall averages, import quotes are now being clocked in at 10% above the levels prevailing just 12 months earlier. And if you zero in on the highly fabricated items that come from Europe and Japan (where dollar devaluation has been more pronounced), the increases are a lot bigger than that. Some equipment lines have risen by more than 20% over this relatively short period of time.

But highly fabricated lines aren't the only ones likely to edge higher. Raw materials, after bumping along at bargain-basement levels for years, should begin to perk up a bit. In fact, *PW*'s sensitive raw material price barometer has jumped significantly over the past two months—recouping virtually all of the decline noted earlier this year.

This upward raw material price trend can be expected to continue—partly because of the weaker dollar, but also because of declining producer inventory levels and recent production cutbacks.

That's not to say that these quotes will take off. The combination of global capacity, relatively weak Free World economic growth, and the need for Third World countries to earn foreign exchange would certainly seem to preclude rapid price runup. A slow rise is more likely as.

Specialty adhesives

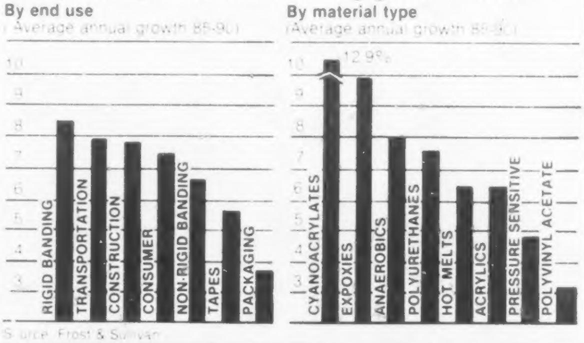
Chances are that you'll be buying a lot more specialty adhesives in the next few years.

A new Frost & Sullivan study sees average annual volume rising about 5% through the end of the decade. And with dollar increases put at only 6% annually, this implies that price rises will average out at only 1% a year—well under the expected general inflation rate.

Frost & Sullivan sees biggest demand gains for rigid bonding applications where a better than 8% annual advance is anticipated. But other key areas such as transportation, construction, and consumer markets are also likely to show better than 7% growth rates.

Here's a more detailed rundown of some key end-use markets:

- **Packaging:** This number one use will advance at only a 3.7% annual rate. But hot melts will do better because of their use in corrugated cartons, and the shift away from solvent-borne adhesives.
- **Non-rigid bonding:** This market continues to grow in such areas as textiles, footwear, bookbinding, and abrasive and friction materials—with a 6.6% annual rate of growth in poundage seen through 1990 when 560 million pounds will be consumed. Hot melts are the key materials—and also the fastest growing.
- **Construction: Polyvinyl acetate leads in poundage but pressure-sensitive products have 3% of the dollar volume.** The overall market here should grow 7.8% a year—to 434 million lb and $456 million by 1990. Fastest growing (more than 10% a year) materials: acrylics, hot melts, polyurethanes, and epoxies.
- **Rigid bonding:** Big markets are furniture, millwork, doors, cabinets, and assembly bonding. The market is forecast to grow from 142.4 million lb last year to 189.8 million lb by 1990.
- **Tape adhesives:** Key materials are hot melts, acrylics, and polyurethanes. The growth rate is put at 5.7% a year—with 1990 totals reaching 253 million lb and $286 million.
- **Transportation:** Autos and aircraft are the big markets—with the latter expected to grow because of the advantages over riveting. Growth rate is put at 7.9%.



Specialty adhesives: Strong growth ahead

By end use
(Average annual growth 85-90)

By material type
(Average annual growth 85-90)

Source: Frost & Sullivan

Chemicals

CURRENT SITUATION: Low feedstock costs continue to put a lid on price advances. Small 4Q hikes haven't held up—and overall averages are still about 1% under a year ago. **Overall chemical output is up 4-5% over 1985.** But gains have been uneven. While synthetic materials are up by more than 7%, organic chemicals show only a 1-2% increase. Inorganic markets like caustic soda and chlorine haven't grown much and the farm recession has cut demand for agricultural chemicals by more than 10%.

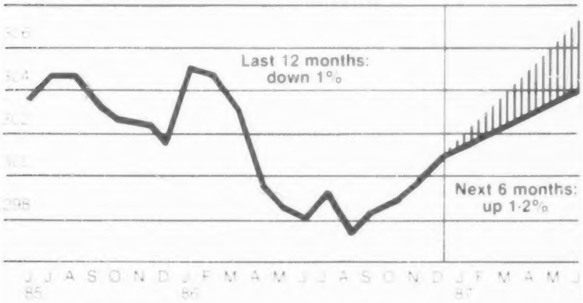
DEMAND: While total demand could be up 4% in 1987, organics will rise only 2.5%. Synthetic resins will do better than average—about a 5-6% gain—but most of this advance will be in plastics. Manmade fibers will be held back by imports and lower prices of competing cotton. Agricultural chemicals should bottom out. **A somewhat better trade balance may aid sales.**

SUPPLY: Operating rates, near 78%, tell the story. But there has been some tightening in plastics where the average utilization rate is put at 88%. But even here there's enough to go around—price easiness is proof. The industry continues to invest in modernization, but there has also been a 3% increase in capacity this year—offsetting some demand gains. Preliminary estimates now suggest another 3% capacity increase this year and another 3% jump for 1987.

PRICE OUTLOOK: Much depends on oil. Assume a $15/barrel oil quote and some increase seems unavoidable. But excess capacity and improving productivity should slow any boosts. Productivity has risen by 6% in 1986. **Best bet: a 1-2% overall price boost over the next six months—and a 2-3% advance for all of 1987. Some specific advances: basic inorganics (2%), basic organics (1%), plastics (3%), paint (3%), drugs (7%), and ag chemicals (0-1%).**

Chemical & aliied products

(Index 1967 = 100)

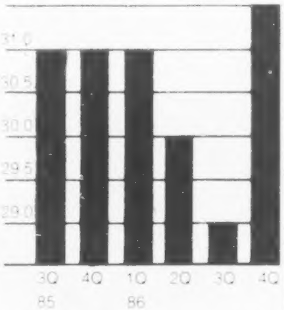


Steel

January's 4% flat-rolled boost could be in trouble—with at least one firm booking first quarter spot business at fourth quarter 1986 levels. But stainless producers are still planning a 2-3¢/lb February boost on sheet, strip, and continuous mill plate. Overall demand, however, is disappointing. Consumption and domestic mill shipments are expected to drop a few million tons in 1987—to 83 million tons and 65 million tons, respectively. One bright spot: Domestic production costs are edging down to only $475/ton on average—actually lower than production plus transportation costs of our Japanese, French, and West German competitors.

High density polyethylene

(Market price blow molding grade)



High density polyethylene

A delayed 4¢/lb increase (originally scheduled for last August) has been partially implemented—with prices expected to settle about 2-3¢/lb above recent levels. The injection molding grade has moved up into the 25-31¢/lb range—with blow molding material fetching a somewhat higher 28-35¢/lb. Demand and supply also suggest basic underlying strength—with the industry operating at 94% of its potential this year. And next year, the figure could be in the high 90s—as less than 1% is added to HDPE's capacity base.

Zinc

Prices are beginning to top out at Noranda's big (230,000 metric ton/year) Valleyfield, Quebec, refinery now that the five-month strike is over. Add in the lackluster outlook for autos and construction—and recent highs (50¢/lb) would seem to be unsustainable. But don't expect any precipitous drop—certainly not to the 33¢/lb low of this past April, for Free World smelter stocks are only in the 330,000 metric ton range, down from a year ago. Best bet: a mid-40s price by yearend or early 1987.

Copper

The buyers' market is likely to continue with few signs of the demand surge in construction, autos, and electrical equipment needed to push prices up. And a similar picture shapes up worldwide. This year, for example, should see about a 145,000 ton Free World demand decline (to 7.2 million tons) with next year's total ex-

PW PREDICTS

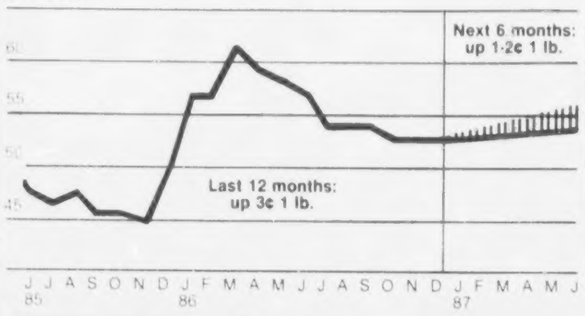
Aluminum

CURRENT SITUATION: The light metal remains shaky—with modest price erosion since October. Merchant ingot has been going for as low as 52¢/lb vs. the 62¢/lb price of earlier this year. And several North American primary producers are asking 58¢/lb for ingot—with billet off to near 66¢/lb. Cause is disappointing demand—buyers are hesistating after hedge buying in the spring. Other causes for weakness: 1) imports (up 51% this year) and 2) restart of capacity shut down by strikes.

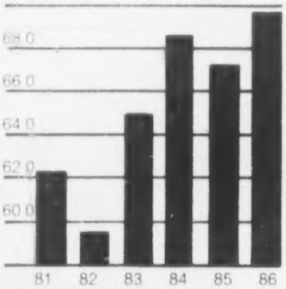
DEMAND: Despite the current slowdown, usage continues to grow. Shipments, which were over 15.5 billion lb in 1984, fell slightly last year but were up about 4% during the first half of 1986. **A 2.5% overall gain is seen for 1986—with another slight increase in 1987.** Part of this optimism stems from the addition of 5-10 lb in new model cars, and the first commercial food can line. Long-term demand is moderately bullish—with average annual growth of 3-4% through 1989.

SUPPLY: No problems are anticipated. Inventories are high with global stocks of primary metal in the 2 million ton range and steady world production of 13 million tons/year is holding. There are also increased U.S. supplies because of recycling and higher imports. Finally, there's more than ample capacity.

PRICE OUTLOOK: Merchant ingot won't rise much above 55¢/lb over the next few quarters—even with some pickup in demand. This should keep fabricated prices—especially in common alloy sheet—relatively weak. Traders and others who buy alumina on the spot market and have it toll processed at low-cost smelters will also keep pressure on prices. All this suggests that the 60¢/lb ingot quotes of early 1986 won't return until late 1987 or 1988.


Aluminum
Market ingot price
(Cents/lb.)

pected to be up only 100,000 tons. Prediction: Prices will decline and fill in the 60-70¢/lb range. Chile, the world's largest producer, agrees, tentatively putting the 1987 average quote for its metal at 65¢/lb.


Paper and paperboard production
(Mil. tons)

Paper and Paperboard

Corrugated prices continue to firm. But another boost in linerboard (to $350/ton) still seems a way off. Elsewhere, increases have been posted in uncoated white papers, bleached board, and the away-from-home tissue market. Also the oft-postponed boost in newsprint finally seems about to stick. Coated papers remain under pressure, with recent reductions noted in both coated free sheet and coated groundwood—with further slippage in the latter area possible as new capacity comes on stream.

ABS resins

Low import prices continue to put downward pressure on the market—as pipe-grade material from the Far East comes in at 52-55¢/lb. That's considerably under the prevailing 55-62¢/lb domestic level. Costs also suggest the lack of upward pressure—as higher styrene tabs are offset by declines in acrylonitrile and butadiene. Another price rise inhibitor: Capacity is being expanded and operating rates are expected to drift down into the low 60s by early next year.

Die casting

The industry is expecting some 1987 improvement as total demand reaches its highest level since 1984, according to the American Die Casting Institute. Specifically, a 7.6% increase is seen for the upcoming year, more than offsetting 1986's estimated 5.6% decline. Some of the more detailed forecasts: Aluminum will be up by as much as 10% in 1987 vs. a 2.3% decline this year. Magnesium, meantime, will gain. Zinc declines will slow—from 6.5% this year to about 3% in 1987.

Lead

The recent price runup—with quotes up 4¢/lb since early September—has gone about as far as it can go. Indeed, with the battery-buying season coming to a close, some price attrition to the low-to-mid 20s may well be in the offing. An increase in lead battery imports also suggests weakness. Then, too, domestic battery shipments could be down slightly next year—from 1986's 72.5 million unit total to about 71.6 million. Moreover, global consumption remains lackluster, with use expected to rise only 1% next year, not nearly enough to offset projected production increases.

Engineering plastics

Prices of polyphenylene sulfide (PPS) have been slashed 31%—to only $1.45/lb. Credit the drop to increased capacity as two new producers (Celanese and Toyo Soda U.S.) enter the market. Competition from other resins may also be a factor—notably from lower-priced thermoplastic polyesters. Not surprising, the new lower PPS tag meets polyester head on in price and is said to have superior qualities for many uses.

Interconnects

Look for more aggressive pricing by AT&T and the regional operating companies. The latter are expected to be extremely competitive, particularly in the PBX market. Adding to easiness is the fact that interconnect sales are expected to remain essentially flat over the next few years: demand increases are put at less than 1% annually through the end of the decade.

Semiconductors

Semiconductor US $ sales
(Billion)

Integrated circuits		Discrete devices	
1985	6.61	1985	1.48
1986	6.85	1986	1.58
1987	7.25	1987	1.62

Source: In-Stat

New projections by In-Stat (a big econometric consulting firm) suggest price declines for the upcoming year. Specifically, worldwide volume is expected to be up about 4.5% more than estimated dollar values. The report also sees increases in U.S. sales. Thus the firm sees totals reaching $8.86 billion (up 5.1%)—on top of this year's estimated 4.2% advance. Integrated circuits will fare best—with the 1987 gain put at nearly 5.8% (to $7.25 billion). But the smaller discrete device sector should post only a 2.2% increase (to $1.62 billion).

Methanol

Supplies continue to outstrip demand. The result is rising inventories and more price erosion with the latter being aggravated by strong import competition. In any event, the total available supply (domestic plus imports) comes to more than 1.5 billion gallons this year—about 100 million above demand. As such, prices have tumbled to 26¢/gal (Gulf Coast, barge)—a far cry from the 40¢/gal quote at the beginning of the year. But some firming in 1987 is possible as consumption grows by 100 million gallons and a 100 million gallon plant is shut down.

Import prices

Take another hard look at domestic goods because import tags are still climbing. In fact, the average overseas price is up close to 3% over the past quarter and an even more impressive 10% *vis-a-vis* year-earlier readings.

Behind the runup has been the weakening dollar which is now really beginning to make itself felt in the form of higher overseas asking prices in such "strong currency" areas as Europe and Japan.

And the price rise is likely to continue—some forecasts are calling for further declines in the dollar.

- **Intermediate manufactured products:** All nine sectors of the sub-group posted price increases during the latest quarter. Nonferrous metals recorded the largest increase in over three years (5.8%), as rising zinc and platinum tags offset declines in copper and cobalt. Non-metallic mineral manufactures were up 5.1%, following a 3.3% rise in the previous quarter.
- **Machinery and transport equipment:** Six of the seven monitored groups in this area posted increases of more than 2% over the past quarter. Road vehicles and parts were up 2.1%, following a 3.0% boost during the previous quarter. And office machinery rose 1.3%, hard on the heels of a 4.0% boost during the previous quarter.

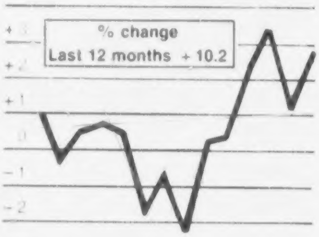
Other boosts over the past quarter were noted for electrical machinery and telecommunications equipment (both up 2.3%), general industrial machinery (up 3.5%), specialized machinery (up 4.1%), and metalworking machinery (up 2.8%).

- **Miscellaneous manufactured goods:** Professional, scientific, and controlling instruments rose 5.3% over the past three months and by close to 20% over the past year.

Elsewhere, boosts were recorded for plumbing, heating, and lighting fixtures (up 1.6% over the past quarter), imported footwear (up 2.5%), furniture (up 1.8%), and imported clothing (up 1.8%).

Import prices: still rising
(All imports except fuels)

An overview
(Percent change from previous quarter)

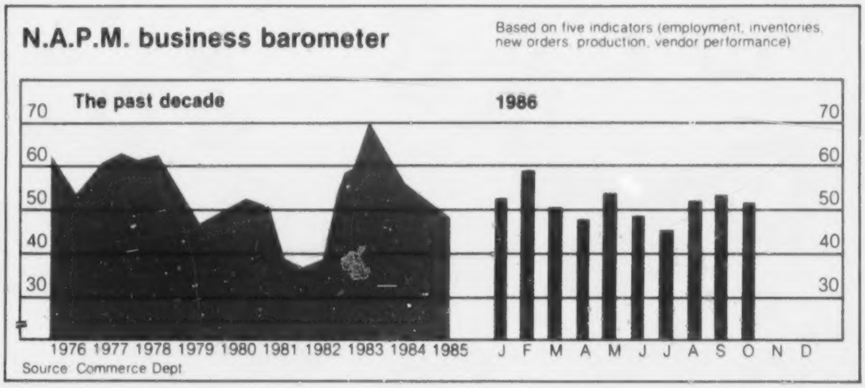


The details
(% increase over past year)

Textiles	7.0
Steel bars, rods, shapes	1.6
Fasteners	8.4
Tools	10.6
Elec. motors and gener.	15.6
Textile mchy.	20.2
Printing mchy.	29.8
Metalworking mchy.	17.5
Heating and cooling eqpt.	16.4
Pumps & compressors	11.1
Mechanical handl. eqpt.	25.0
Bearings	14.9
Office mchy.	13.1
Elec. mchy.	10.0
Autos	16.7

Source: Bureau of Labor Statistics

BUSINESS DATATRAK


N.A.P.M. business barometer

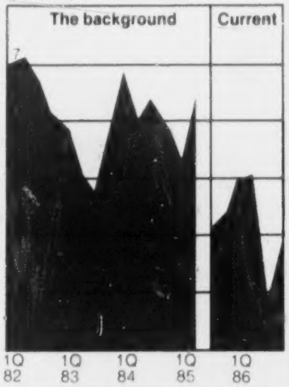
Based on five indicators (employment, inventories, new orders, production, vendor performance)

Source: Commerce Dept.

Leading indicators

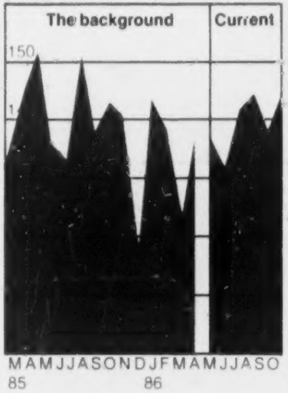
1. Savings rate

(percent)



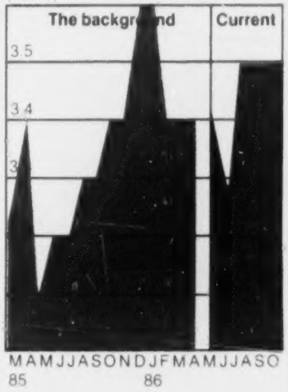
2. Industrial distributor sales

(index: 1977 = 100)



3. Factory overtime

(hours)



KEY ECONOMIC TRENDS

Turndown not in cards, yet

Talk of a possible business slowdown is just that. It's just not in the cards.

Growth will continue to be disappointing—falling below the 4% or so that the Administration would like to see, but it will be growth nevertheless. GNP will advance at a 2-3% annual rate for at least another few quarters.

Why no downturn? First and foremost, the time-tested barometers are still pointing up, albeit at a shallow angle. That goes not only for the N.A.P.M. business barometer (still a shade above the neutral 50 level), but also for the Commerce Dept.'s "composite" index which has been edging up almost without interruption for about a year.

Cautious optimism is based on more than just statistical indicators. The key point to keep in mind: There are no bottlenecks, no inflation problems, no equity restraints, and no inventory imbalances—problems that traditionally have led to changes in the economic outlook.

Another healthy sign is the improvement in our trade balance in recent months. Much of this, of course, reflects a fall-off in imports—prodded by a weaker dollar.

Certainly, no one expects a miraculous turnaround, but the betting is that the trade deficit will fall from an estimated $170 billion (1982 dollars) this year to about $120 billion by the end of 1987. That's a big $50 billion improvement—enough to add about one percentage point to GNP in the year ahead.

Another bright spot—at least up until now—has been consumer spending. This shows up most clearly in the savings ratio (savings as a percentage of income). Note in the chart that the ratio is far under levels of a few years back—indicating that consumers have their wallets wide open.

But the question is whether this trend will continue. Auto sales, for example, are bound to take a temporary breather after the low financing-inspired buying binge of the past fall. Even here it doesn't look all that bad. Sales are expected to approach 11 million units in 1987—not too much under this year's high 11.5 million figure.

Consumer real disposable income should also improve next year—probably something on the order of 2-3%. And if you assume a 4-4.5% savings rate (as most economists do), this should translate into increased gains in such other areas as furniture, appliances, and clothing.

Even industrial production is looking a little better. Industrial distributor sales (a leading indicator of factory output) has turned up a bit in recent months. If nothing else, it means that factory managers are getting ready for some upturn in demand.

A somewhat better industrial climate also shows up in higher factory overtime figures. Overtime is usually strong when manufacturers are a bit more hard pressed to meet demand.

Another encouraging sign: the recent leveling in help wanted advertising after some modest decline.

All this doesn't mean, of course, that industrial production is going to take off. Far from it—gains in the consumer sector will be modest. Equally important, capital equipment isn't likely to show any appreciable advance. Military output will be up, and, when added to other upward forces, should produce a 3% increase at annual rate over the first half of 1987.

Fleeting trends

Mid-size cars are still the choice of fleet car buyers, according to a new National Association of Fleet Administrators (NAFA) survey.

Nearly three out of every five fleet cars purchased over the 1987 model year (58%) will be mid-size, compared with projections for compacts (24%), large-size cars (12%), and subcompacts (6%).

Other key findings of the study of 432 U.S. and Canadian fleets:

- Aggregate fleet purchases will come to 93,829 units—suggesting that about 25% of the existing fleet will be replaced this year.
- Company ownership is still the preferred means of possession—54% vs. 42% leased and 4% employee owned.

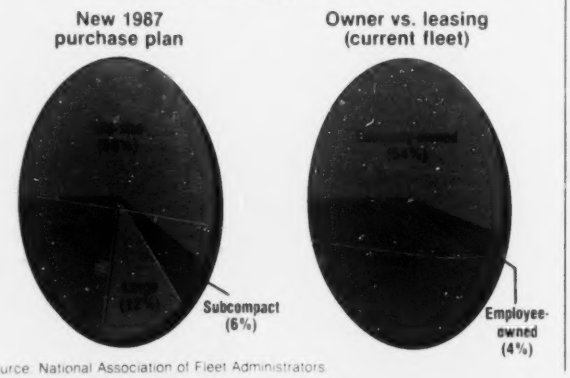
Imports do not figure very highly in 1987 acquisition plans—with foreign makes expected to come to only 1,350 units (less than 2% of the total). And even this is deceptively high since one fleet alone plans on buying 379 imports.

- An overwhelming 94% of the respondents say lower gasoline prices will not affect car selection. Of those that said gasoline would have some impact, eight said they would probably change from 6-cylinder to 4-cylinder engines. Others said the money saved would allow them to buy additional optional equipment.

More than 90% also said elimination of the investment tax credit would not affect car selection. Of the remaining fleets, almost all noted they would be forced to eliminate some options.

- More than half the fleets (232) give vehicle operators their choice of make of vehicle; 164 give them choice of model; 155 give them choice of vehicle accessories; and 51 give them choice of engine.

Fleet car strategy at a glance



Source: National Association of Fleet Administrators

Get moving

Don't wait too much longer if you're looking for bargains in commercial and industrial real estate.

Reason: Vacancy rates—near all-time highs—are finally beginning to show signs of topping out. And this trend is likely to continue—judging from a fall-off in both new office construction (now running at only a $29 billion annual rate vs. $32 billion last year) and new factory and warehouse activity.

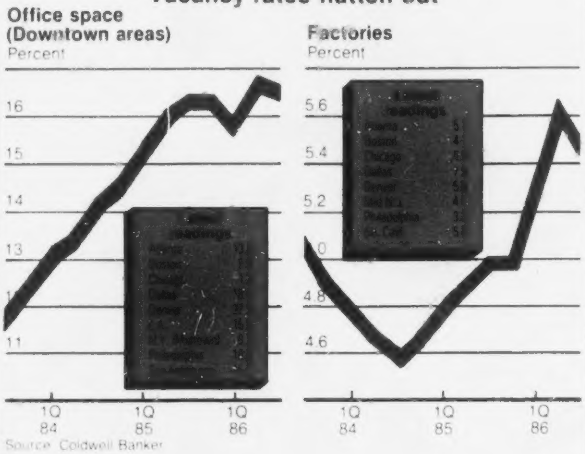
But it will take time for these trends to make a significant impact. Meantime, it's a buyers' market—particularly in office space where downtown and suburban vacancies (16.7% and 23.8% respectively—see chart) are resulting in such concessions as free rent for a portion of the lease, long leases, and office preparation at the landlord's expense.

According to a new survey by Coldwell Banker, new capacity in downtown office areas is especially evident in New York, Dallas, and Chicago—with about five million square feet of new office space being completed in these cities.

Also, eleven downtown markets show vacancy rates of 20% or more—including Dallas, Denver, Fort Lauderdale, Miami, Nashville, New Orleans, Oklahoma City, Orange County (CA), Orlando, Phoenix, and San Antonio.

The overall rate for industrial vacancies is finally beginning to edge low-

Vacancy rates flatten out



Source: Coldwell Banker

er—to 5.5%. But that's still a full percentage point above 1984 levels prevailing.

Areas with highest industrial vacancies (6% or more) include Charlotte, Chicago, Dallas, Houston, Kansas City, Miami, Northern and Central California, and St. Louis. Areas with lowest rates here (under 4%) include Columbus, Nashville, Philadelphia, Portland (OR), Seattle, and Washington D.C.

CURRENT PRICES

Prices registering tilt-upward

Industrial producer prices continue a moderate upward trend—first noted earlier in the fall.

The latest increases can hardly be called alarming. They averaged less than 1% over the last three months, but do represent a shift from the first half of 1986 when sagging energy tags actually produced a declining trend in overall industrial prices.

Aside from a turnaround in energy tags, scattered price increases over the past few months have been reported in the industrial chemical, plastic resin, paper, metals, and machinery sectors. Some component parts have managed to edge up a bit, too.

It's not altogether certain that all of the increases will hold up in the marketplace, especially in the cases of industrial chemicals and plastics. Buyers report considerable success in holding down or postponing announced boosts.

Metals, too, have to be regarded as a mixed bag. Recent increases in zinc and lead may not have much staying power—as seasonal declines in demand and increased production produce easier markets by early 1987. Recent steel increases could be vulnerable once strike problems at USX are fully resolved.

Construction materials, while up slightly, also have their soft spots. Thus cement has slipped a bit over the past month—and such oil-related products as asphalt paving now trail year-ago levels by significant percentages.

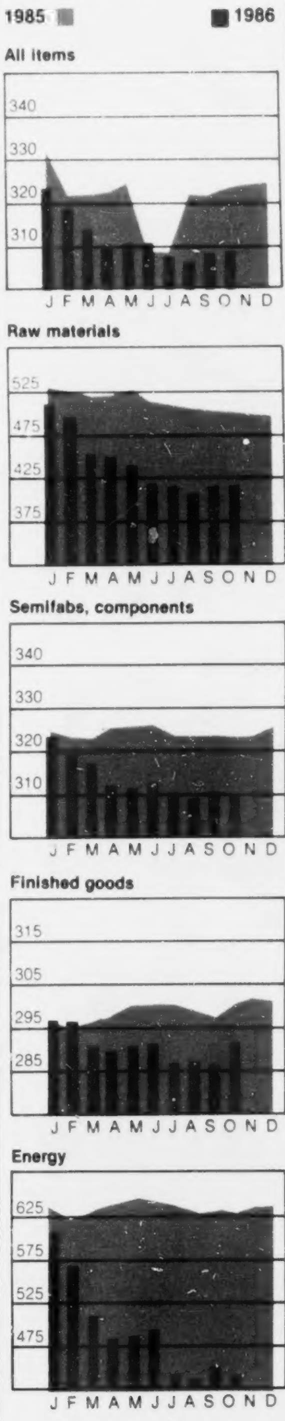
The scattered increase in capital goods areas should continue, however, despite the rather lackluster demand pattern. Reason: Overseas prices have been moving up substantially since many of these imports come from Japan and Europe—areas where

This month's breakdown

	Latest level (Nov)	% change from: Month ago	Year ago
Bearings	356.7	−0.1	0.7
Bolts, nuts, etc	276.6	−0.4	−0.1
Chemicals, inorganic	296.3	0.6	−1.1
Chemicals, organic	323.9	0.7	−8.8
Concrete products	324.3	−0.2	0.4
Corrugated cartons	275.0	1.0	3.8
Cutting tools, small	291.9	−0.1	1.2
Electric lamps (bulbs)	347.5	0.8	−0.1
Electronic components	203.3	0.2	2.9
Fans and blowers	365.9	0.0	1.7
Foundry and forge products	361.7	0.0	−0.7
Fuel oil (residual)	452.1	8.3	−48.9
Furniture, commercial	320.7	0.7	3.1
Gasoline	310.9	−8.2	−43.9
Glass, flat	232.7	0.1	2.0
Glass containers	400.8	0.0	3.2
Gypsum products	341.9	1.0	0.6
Hand tools	385.5	0.4	2.3
Hand tools, power driven	241.1	1.1	2.8
Industrial furnaces	396.0	0.1	1.2
Integrating and measuring instruments	237.3	0.0	1.9
Internal combustion engines	353.9	0.0	2.1
Lubricating oil	356.7	−0.4	−5.1
Lumber millwork	319.7	−0.1	−1.2
Material handling equipment	297.0	0.0	1.1
Metal containers	362.5	0.0	1.3
Metal mill shapes (nonferrous)	299.8	−0.4	−2.4
Metal tanks	297.8	0.2	−2.5
Motors and generators	352.3	−0.3	0.3
Motor trucks	331.4	12.4	6.0
Office and store equipment	154.7	0.2	0.7
Paperboard	280.9	1.5	5.7
Paper boxes and shipping containers	274.1	0.2	2.5
Paper office supplies	239.6	0.6	1.6
Paint	282.4	0.0	1.7
Plastic resins	292.7	0.3	−2.7
Precision measuring tools	269.8	−0.6	2.8
Pumps and compressors	363.2	0.0	1.3
Refractories	370.8	−0.7	−0.1
Rubber belts and belting	337.1	−0.1	−1.2
Scales and balances	232.7	0.0	1.6
Steel products	349.9	0.3	−3.7
Switchgear	286.1	−0.3	1.0
Textiles, synthetic fibers	148.8	−0.4	−0.7
Textiles, gray fabrics	149.6	−0.4	−1.0
Tires and tubes	234.0	0.0	−0.7
Transformers and power regulators	233.6	−0.2	0.3
Welding equipment	301.8	0.1	3.2
Wire and cable	205.5	0.0	−0.1

Industrial prices

(Index 1967 = 100)



Source: Bureau of Labor Statistics

Steel

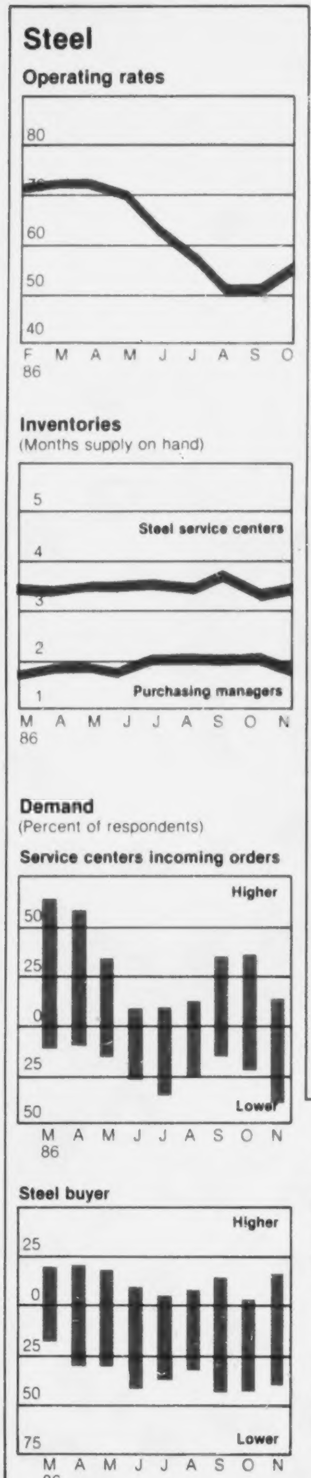
Operating rates

Inventories (Months supply on hand)

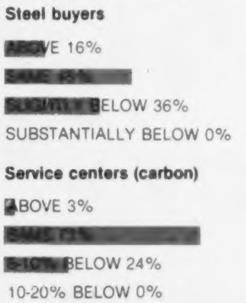
Demand (Percent of respondents)

Service centers incoming orders

Steel buyer



Import prices (Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

currencies have appreciated significantly relative to the dollar.

Paper products should also continue to edge up. But even here the gains will be quite moderate—as some offsetting weakness persists in the coated paper area.

What does it all add up to? Further inching up in the aggregate industrial producer price index can be expected—with about a 3% annual rate of rise likely over the next few months. Even so, it may be next spring before the overall index (weighted down by earlier energy declines) begins to top year-ago levels again.

STEEL SCENE

Steel demand still down

There's still no sign of any appreciable pickup in steel demand. Indeed, things could get worse before they start getting better.

Both buyers and service centers are agreed on this point. An impressive 39% of steel-buying purchasing managers responding to the latest N.A.P.M. survey feel that their receipts of the metal will be heading down over the next three months—even more than twice as many as the 16% who contemplate some increases.

Steel distributor figures are even more depressing—40% of those responding to the latest Steel Service Center Institute (SSCI) survey feel incoming orders will be down over the next three months, compared to only 15% who feel some increase in incoming business may be possible.

The latter figures are particularly disappointing. Over the previous two months when a similar question was posed, those betting on increases actually outpaced those fearing declines.

This, perhaps, helps to explain why Andrew G. Sharkey, SSCI president, is now estimating a 2% decline in this year's total distributor shipments—a figure suggesting only about a 20 million-ton shipping year. This estimate is especially disturbing since service centers were in the plus column as recently as early summer.

Profit margins are another steel service center worry. As Sharkey puts it, "Industry overcapacity, deflationary pressures, and the competitive realities of a buyers' market are the primary reasons service center profitability has not kept pace with shipping volume."

This competitive situation is also showing up on the mill level where five of the nation's largest integrated steel makers reported third quarter losses. And the situation is not likely to change much. Thus, despite recent work stoppages, the industry's plans for first quarter 1987 price boosts are running into flak.

Service center replies as to what they'll be paying mills for steel in the months ahead also suggest a continuing competitive situation. Specifically, the majority of respondents (55%) feel mill tags over the next six months will remain at or below current levels. Contrast that to March and April when only 12% felt that prices would hold steady or drop.

Behind all this weakness are less-than-hoped for demand, close-to-the vest inventory policies, and continuing import competition. Looking at each of the above:

- **Demand:** Domestic mill shipments for the year as a whole now look to reach only 68 million tons—part of a continuing decline which saw 1984 and 1985 shipments at 74 million and 73 million tons, respectively. And next year, the figure could drop to only 65 million tons as such key steel-consuming sectors as autos, construction, and capital equipment all remain level or even drop a bit.
- **Inventories:** Adding to the problem is the fact that no one is buying a ton more than is absolutely necessary. Buyers and service centers, for example, have cut day's supply about 5% over the past few months. And little change is expected—with

both groups feeling that stock levels are still on the high side.

Moreover, no one seems really concerned about tightness in such product areas as coated sheet. Reason: The feeling is that things will loosen again once strike problems are resolved.

- **Imports:** Incoming shipments still take up more than 20% of the market—as overseas prices remain low relative to comparable domestic levels. This is especially true in stainless where 21% of the service centers still report price breaks in the big 11-20% range.

But there are some signs that imports could ease up—because of quotas, the weakening dollar, and the considerable progress being made by U.S. mills to pare costs.

On the latter score, U.S. productivity has jumped by more than 30% since 1982. Combined with a weaker dollar, it means that the average cost to produce a ton of domestic steel is now below that of such traditional competitors as Japan and West Germany.

PROCUREMENT STATUS

No-sweat procurement

Leadtimes have inched up a bit over the past month. But much of this was due to some strike-induced steel stretchouts. Add in the normal fall pickup in activity—and the situation remains basically unchanged from earlier in the year.

- *PW*'s exclusive leadtime index registered just 51—only one point above the 50 mark where stretchouts and shrinkages balance each other out.
- N.A.P.M.'s speed of delivery yardstick shows that the 8% reporting slower deliveries was offset by the 6% noting speedups. More significant, an overwhelming 86% continue to report no change.

Nor are these the only indicators of a fairly problem-free environment. More to the point: 1) Only one item appears on the N.A.P.M. short supply list—titanium dioxide, 2) nobody seems in a rush to build inventories—with parers still outnumbering accumulators, and 3) 55% of queried buyers are committing 30 days or less in advance—unchanged from month-earlier levels.

PMs also remain optimistic about the future.

A new check on factory operating rates—as reported by the Federal Reserve Board—seems to support this PM's opinion. Thus overall factory utilization rates are currently being clocked in at the 79% level—some six percentage points under the 85% cut-off point that traditionally has separated a buyers' from a sellers' market.

And what's true of the overall average is pretty much the case across the board. Indeed, virtually every single industry monitored by the Fed is operating at or under its preferred utilization rate.

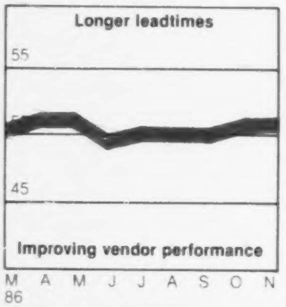
More significant, there's little to indicate any basic change. Industrial production forecasts, for example, show output rising at a 3% annual rate for at least another six months—not that much above the current 2% rate of new capacity additions.

In short, the buyers' market is here to stay.

Monthly procurement status report

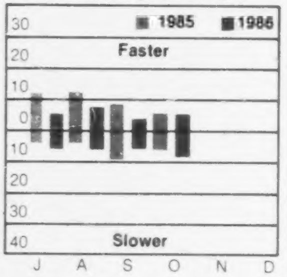
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



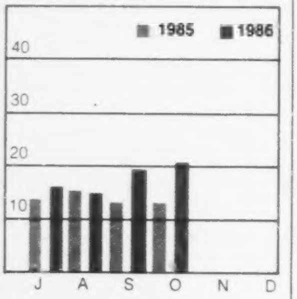
Delivery performance

(Percent reporting deliveries)



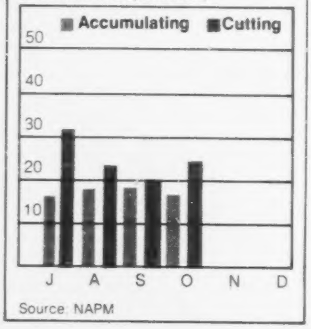
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: The USX strike has upped steel leads—with these new extended weekly waits noted: c-r, h-r, and coated sheets (10), heavy and light plates (3-6), and h-r bars (4-5). MOS semiconductors are also out (to 16-22)—with ICs remaining at this same level. No change in capacitors (10-19), and resistors (6-12).

Cleveland: Moving out to these longer weekly waits are steel canisters (2), coil coating paint (3), and polyethylene (2-3). But plastic packaging materials edged in (to 4-5). Not much change in hardwood (2-3), softwood (1-3), waterproof papers (4-5), corrugated boxes (2-3), cold finish aluminum (8), and skids (1-3).

Los Angeles: Modest stretchouts (new weekly leads in parenthesis) for aluminum tubing (5-7), paperboard cartons (4-5), and domestic fasteners (8-10). Foreign fasteners remain unchanged at 16-18—as do galvanized steel (12-14), brass castings (8-19), pumps (10-12), custom seals and gaskets (5-7), and standard valves (10-12).

Houston: Metals remain relatively easy—with leads generally in the 0-4 week range. Alloy pipe activity is up. But no problems are antici-

BUSINESS DATATRAK

pated—despite some plant closedowns. Other typical leads (in weeks): galvanized steel coils (16), steel fasteners (2), plastic bottles (6), polyethylene and polypropylene (4-5).

Philadelphia: Some shrinkage is noted (to these new weekly waits) in stainless extruded tubing (5-6), copper alloy tube (6-8), and copper alloy sheet, bar, and plate (6-8). But high temperature metals are out a bit (to 10-12). Other metal leads: carbon round coil from mill (8-10), and stainless round coil from mill (10-12).

Pittsburgh: Another month of relatively unchanged weekly leads—with key lines shaping up as follows: corrugated and folding boxes (3-4), wirebound boxes (4-5), multiwall bags (6), plastic packaging material (2-3), plastic bags (3-4), waterproof papers (8), steel strapping (2-3), PVC resins (6), alloying metals (2-3).

Leadtimes (in weeks)

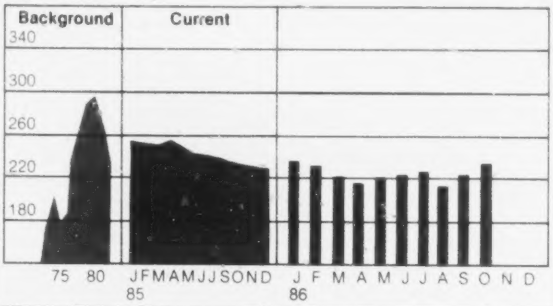
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	10	7½	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	4½	3½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4½	4	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	6½	6½	7½
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	7	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14½	14½	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	9	11
Motors (Phil)	9	9	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	1½
Plywood (Chgo)	3	3	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅓	⅓	⅓
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1

	Now	Month ago	Six months ago
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	13
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	11	11	12
Brass Castings (LA)	9	9	7
Brass Rods (Chgo)	9	9	7½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	4	4	8
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	3	3	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	9	7	7
Fasteners, Std. (Phil)	3	3	2½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	13
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

Raw material price barometer

Latest month 234.8
Month before 221.2
Year ago 236.9

(Index: 1967 = 100)



Latest spot market prices

FERROUS METALS

	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.25
Steel, plates, Pitts., cwt	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt	25.90	25.90	27.85
Steel, strip, C.R., Chi., cwt	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65

NONFERROUS METALS

	Latest price	Previous month	Year ago
Aluminum, ingot, lb. (market place)	.525	.555	.445
Antimony, N.Y., dealer, lb	1.18	1.12	1.33
Beryllium-copper, cost ingot, lb	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb	1.27	1.29	1.30
Brass, yellow, [sheet], lb	1.22	1.24	1.25
Cadmium, N.Y., dealer, lb	1.07	1.05	0.77
Copper, electrolytic, wire bars, refd., lb	.63	.65	.67
Copper sheet, over 24 in., lb	1.36	1.38	1.39
Lead, common, N.Y., lb	.268	.240	.190
Magnesium, pig ingot, [99.8%], lb	1.53	1.53	1.48
Mercury, 20 fl. lots, N.Y., fl	192.00	178.00	315.00
Molybdenum, oxide, dealer, lb	3.15	3.15	2.65
Nickel, cathode, dealer, lb	1.74	1.79	1.90
Platinum, dealer, oz	537.00	604.00	328.00
Silver, N.Y., oz	5.73	5.71	6.03
Tin, N.Y., dealer, lb	2.86	2.58	5.38
Zinc, Prime West, East St. Louis, lb	.465	.440	.360
Zinc, die casting alloy, No. 3, lb	.525	.505	.425

PAPER

	Latest price	Previous month	Year ago
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.24	16.25	16.13
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	580.00	580.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	320.00	320.00	290.00

TEXTILES

	Latest price	Previous month	Year ago
Burlap, 10 oz., 40", N.Y., yd	.214	.218	.240
Cotton drill, 1.85, 59", 68x49, N.Y., yd	1.045	1.030	1.045
Cotton middling, 1", N.Y., lb	.433	.398	.568
Printcloth, 48", 80x80, N.Y., spot, yd	1.05	.82	.68
Army duck, 37", 13 oz., yd	1.40	1.45	1.30
Blended printcloth, 64", 78x54, yd	.80	.78	.85
20s combed yarns	1.74	1.74	1.95
Wool 64s, Staple, lb	1.90	1.90	2.03

CHEMICALS

	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb	.395	.395	.455
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal	.85	.81	1.14
Caustic soda, 76% solid, drums, carlots, cwt	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb	.58	.58	.58
Formaldehyde, USP, 37% [12% to 15% meth.], tanks, lb	.106	.106	.106
Glycerine, synthetic, tanks, lb	.91	.91	.91
Methanol, sny., tanks, 4,000 gals, f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb	.22	.22	.22
Phthalic anhydride, tanks, lb	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb	.280	.255	.280
Polypropylene, homopolymer grade (market price), lb	.325	.320	.350
Polystyrene, general purpose grade (market price), lb	.35	.33	.35
Polyvinyl chloride, pipe grade (market price), lb	.275	.275	.260
Soda ash, 58%, light carlots, cwt	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb	.22	.22	.26
Sulphur, crude, ex-terminal Tampa, Fla., lt	157.50	157.50	157.50
Sulphuric acid, 66%, commercial tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg. carlots lb	.77	.77	.69
Xylene tanks, gal	.80	.80	1.36

BUILDING MATERIALS

	Latest price	Previous month	Year ago
Lumber, 2x4 fir, mbf, cl	328.35	332.65	319.65
Lumber 2x2 pine, mbf, cl	316.60	315.20	298.00
Plywood, plyform, ½", msf, cl	592.35	592.90	582.30
Plywood, ½", msf, cl	392.45	390.10	381.80
Cement, bulk, ton, tl	63.28	63.43	64.73
Sand, ton, cl	6.62	6.62	6.36
Ready-mix concrete, 3,000 psi/cu. yd. 15 cu. yd	48.15	45.96	48.00
Crushed stone, 1½", ton, cl	7.83	7.73	7.80
Concrete blocks, sand/gravel 8"x8"x16", ea., tl	0.82	0.82	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	215.07	215.07	212.44
Brick, common, per thousand, tl	186.51	186.01	184.53
Asphalt paving, AC-20	127.36	136.69	175.86
Concrete sewer pipe, 12" prem. joint, per foot, cl	7.36	7.36	7.14

FUELS

	Latest price	Previous month	Year ago
Fuel oil, No. 6 or Bunker C, Gulf, bbl	10.50	11.00	20.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	14.75	14.75	27.75
Gasoline, 91 oct., reg., Los Angeles rack, gal	.415	.360	.750
Gasoline, 94 oct., reg., Chi., tank car, gal	.436	.415	.813
Heating oil, No. 2, Chi., bulk, gal	.428	.411	.860
Heating oil, No. 2, N.Y., bulk, gal	.420	.420	.878
Heavy fuel, PS 400, Los Angeles rack, bbl	26.50	26.50	26.50
Jet kerosene, gal	.433	.418	.853
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.240	.240	.345

SCRAP MATERIALS

	Latest price	Previous month	Year ago
Steel, No. 1, hvy., dlvd., Pitts., ton	78.00	76.00	69.00
Steel, No. 1 hvy., dlvd., Chi., ton	72.00	70.00	68.00
Copper, No. 1, East, wholesale buy, dlvd., lb	.545	.550	.550
Copper, No. 2, East, wholesale buy, dlvd., lb	.465	.475	.470
Brass, red, East, wholesale buy, dlvd., lb	.505	.510	.510
Brass, yellow, East, wholesale buy, dlvd., lb	.330	.310	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb	.315	.340	.295
Alum., mixed clip., E., wholesale buy, dlvd., lb	.330	.360	.320
Zinc, old, East, wholesale buy, dlvd., lb	.200	.170	.110
Lead, clean solids, East, wholesale buy, dlvd., lb	.168	.140	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	28.00	28.00	9.00
Paper, old corrug. box, dlr., N.Y., ton	24.00	23.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb	.09	.09	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb	.105	.110	.160

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Cutthroat markets killing inflation

Robert S. Reichard executive editor

The nation's industrial purchasing managers do not seem particularly concerned about any new outbreak of inflation.

While they see some acceleration in the rate of price increase in the year ahead, most feel any acceleration will be moderate. A new nationwide survey of ***PW*** readers indicates an overall 1987 procurement cost advance of about 3.4%—not that much above this year's low 1.3% increase.

In the words of one Midwestern buyer, "It would be unrealistic to expect a repeat of this past year when energy tags exerted a strong downward pull. But given all the demand, supply, and cost factors, I can't see quotes moving up by much more than a few percentage points—even if demand perks up a bit."

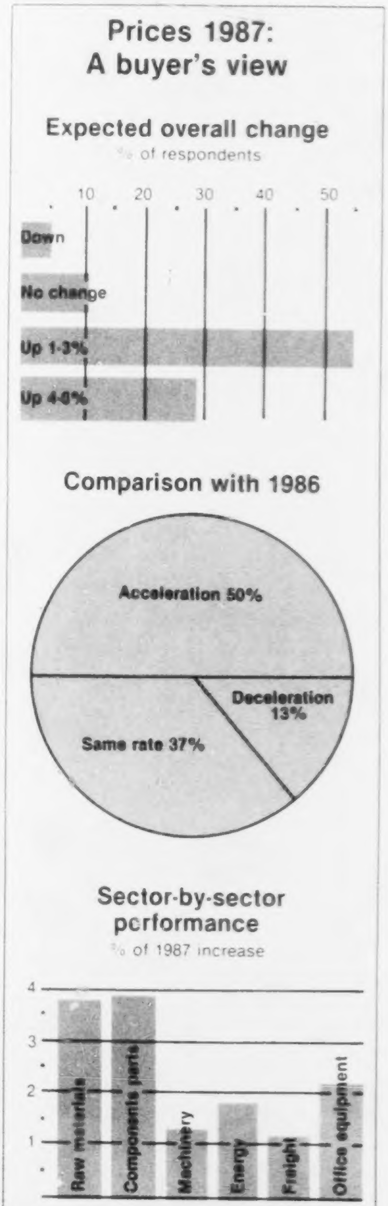
Some of the just-completed survey's more specific findings:

■ **The overall price trend:** While roughly half the queried PMs see some price acceleration for 1987, seven out of ten say the boosts will only be in the "3%-or-under" range (see chart). And even this doesn't tell the whole story—16% feel they can still hold costs at or under 1986 levels.

■ **Sector-by-sector variation:** Best showing will be in the transportation area where freight rates are expected to rise only 1.2%—not much more than the 0.8% advance estimated for 1986. Other anticipated increases (in ascending order): machinery (1.4%), energy (1.8%), office equipment (2.2%), and raw materials and component parts (both just shy of 4%).

■ **Strongest price areas:** Buyers mention steel and paper products, such as corrugated containers, as the lines most likely to sport bigger-than-average price advances over the coming year. Other products singled out for close monitoring include fabricated metal parts, services, and imports where a weaker dollar is expected to put upward pressure on many foreign suppliers.

■ **Weakest price areas:** Several categories of equipment, including machine tools, are high on the list here. Other sectors where price boosts should be hard to come by: nonferrous metals, electronic components, computers, computer software, other types of electronically-oriented office equipment, textile mill products, paint, and industrial chemicals.



Prices 1987: A buyer's view

Expected overall change

% of respondents

Comparison with 1986

Sector-by-sector performance

% of 1987 increase

Source: PurchasingWorld

■ **Upward tugging factors:** In addition to somewhat stronger oil prices, other forces likely to play a role in a slightly faster rate of inflation for 1987 include 1) a modest pickup in demand (a 2-4% increase in industrial production vs. less than 1% this year), 2) supplier cost pressures, 3) somewhat higher factory operating rates, and 4) higher import tags.

But as one purchasing executive adds, "These will all be playing roles. It still looks like a buyers' market in most sectors—and we intend to do all we can to keep it that way."

Several buyers, for example, have already sent letters to key suppliers, noting that they will not accept any increases without detailed cost justification. And even then, many say they intend to shop around before accepting any boost. And they are placing continuing emphasis on blanket orders, long-term commitments, competitive bidding, and volume purchases.

Imports are not being overlooked either. There's upward pressure in many areas, but not across the board—the dollar has held its own against the currencies of such major U.S. suppliers as South Korea, Taiwan, Canada, and Latin America.

Closer cooperation with major vendors is also high on most buyers' agendas—not only because it can help cut procurement bills over the longer pull, but also because it is a necessary prerequisite for just-in-time inventory strategies.

The purchasing vice president of a major capital equipment firm sums it all up, "We can no longer afford the luxury of paying a cent more than we have to. Our margins are thin—if we don't cut costs, our competitors will—and that could spell disaster in today's markets."

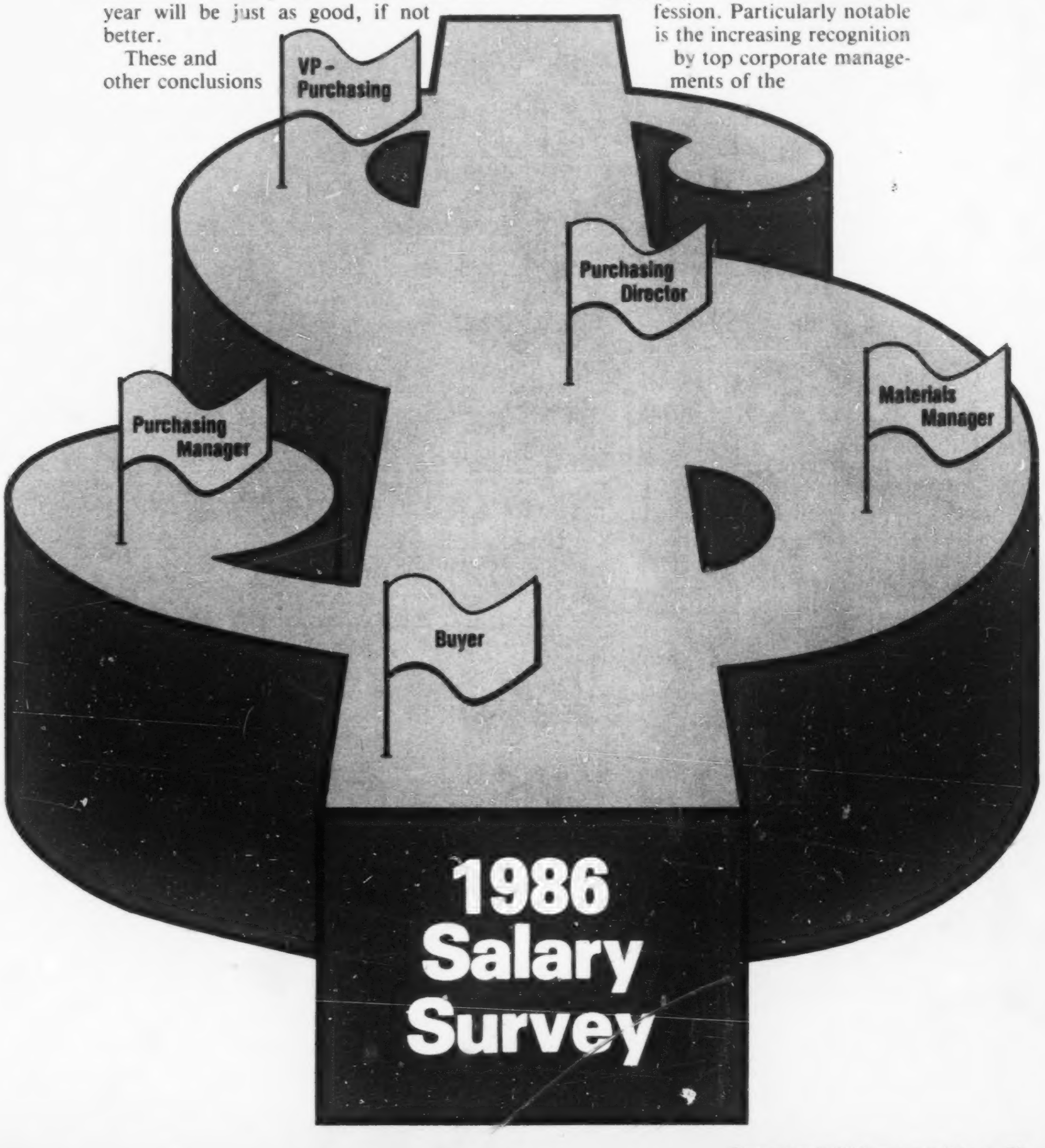
PW

Pull your pay stub and see how you're faring

Robert R. Blumel,
managing editor

Overall, it was a good year for purchasing people. Paychecks got a little fatter and job satisfaction increased measurably. And it looks as if next year will be just as good, if not better.

These and other conclusions drawn from this year's survey of purchasing salaries—the most comprehensive *PurchasingWorld* has conducted to date—reveal some very positive trends in the profession. Particularly notable is the increasing recognition by top corporate managements of the


VP - Purchasing
Purchasing Director
Materials Manager
Purchasing Manager
Buyer
1986 Salary Survey

importance of the purchasing function in their organizations. This is reflected in higher wage levels, more bonus and incentive plans, and the smaller number of purchasing executives who feel they are not compensated fairly.

Younger, educated, women, and minorities

Another significant development is the increasing number of young, well-educated people who are entering the profession with better starting salaries and greater opportunity for advancement. The under-28 group with bachelor's or master's degrees grew by 4.6% over 1985 (from 11% to 15% of the total surveyed work force). Starting salaries for these bright entrants into the field jumped from $18,900 to $21,500 on average from 1985 to 1986.

The fact that purchasing is attracting younger people is also attested to by the drop in the average age and years of experience of all purchasing professionals. In 1986,

Composite salary ranges

VP PURCHASING
High average $193,000
Mode range $72,500-$101,600
Low average $40,800
Median $88,600

VP MATERIALS
High average $201,900
Mode range $91,500-$119,700
Low average $61,000
Median $103,800

PURCHASING DIRECTOR
High average $131,000
Mode range $64,700-$77,600
Low average $48,900
Median $72,500

MATERIALS DIRECTOR
High average $131,700
Mode range $66,900-$79,900
Low average $48,500
Median $73,700

PURCHASING MANAGER
High average $107,200
Mode range $43,200-$63,000
Low average $31,900
Median $54,000

MATERIALS MANAGER
High average $114,200
Mode range $51,600-$73,000
Low average $37,700
Median $61,300

PURCHASING AGENT
High average $91,800
Mode range $39,300-$59,100
Low average $36,600
Median $44,200

SENIOR BUYER
High average $75,000
Mode range $35,700-$45,400
Low average $28,000
Median $40,700

BUYER
High average $63,000
Mode range $28,100-$39,200
Low average $23,200
Median $34,000

JUNIOR BUYER
High average $39,600
Mode range $21,900-$31,000
Low average $21,500
Median $25,700

EXPEDITER
High average $48,000
Mode range $20,700-$30,100
Low average $16,700
Median $25,200

TRAINEE
High average $31,400
Mode range $19,700-$27,000
Low average $16,600
Median $22,800

High = Average of the highest 10% of salaries surveyed
Mode range = Range in which the largest number of reported salaries fell
Low = Average of the lowest 10% of salaries surveyed
Median = Average of the middle 80% of salaries surveyed

PURCHASING SALARIES BY INDUSTRY

	Food, tobacco, & related products	Transportation, shipping & related services	Energy	Textile mill, apparel, leather	Rubber, plastics, products	Electric, electronics equipment	Medical, pharmaceuticals, & related products
VP PURCHASING							
high	114,800	130,500	109,800	89,400	102,900	133,800	126,700
median	93,900	96,700	94,000	82,000	91,500	102,200	93,400
low	63,500	80,200	79,100	63,600	64,200	84,200	72,500
VP MATERIALS							
high	147,000	192,000	148,000	90,000	105,700	132,400	150,000
median	109,900	105,900	101,000	78,000	88,600	107,600	109,900
low	100,000	99,300	72,300	59,700	65,000	72,500	100,000
PURCHASING DIRECTOR							
high	74,300	75,000	94,000	81,200	74,000	78,000	80,300
median	59,000	61,000	82,900	61,500	63,000	65,500	73,000
low	47,900	44,300	62,000	48,900	56,600	55,000	54,000
MATERIALS DIRECTOR							
high	93,000	88,000	96,600	78,300	80,000	72,000	83,000
median	74,500	62,500	88,400	60,000	64,400	60,900	76,600
low	54,600	59,000	63,700	53,700	52,000	48,000	51,300
PURCHASING MANAGER							
high	62,000	78,000	80,800	60,000	57,900	52,500	78,000
median	47,500	53,400	55,000	52,000	48,700	47,500	49,500
low	39,600	46,900	42,300	49,900	41,300	35,900	30,600
MATERIALS MANAGER							
high	72,500	80,000	79,600	69,000	77,400	68,600	70,900
median	52,500	57,300	58,000	59,500	58,400	57,600	55,000
low	47,300	49,900	45,500	52,800	51,600	45,900	42,000
PURCHASING AGENT							
high	51,000	44,000	42,500	48,000	39,800	45,000	59,000
median	33,500	32,900	36,000	34,500	36,000	35,500	37,500
low	34,800	31,000	30,000	29,000	29,500	30,000	24,800
SR BUYER							
high	49,000	45,000	48,000	37,500	40,000	42,300	43,000
median	34,000	34,000	33,500	33,900	36,000	35,900	36,000
low	30,000	27,500	29,000	32,000	27,800	30,300	22,500
BUYER							
high	42,000	36,000	35,000	33,000	34,600	33,000	40,000
median	27,500	26,300	22,900	20,200	22,400	26,300	31,500
low	21,600	21,300	20,700	18,100	19,600	18,400	21,800
JR BUYER							
high	27,100	25,600	26,000	25,000	24,900	26,700	28,100
median	21,300	20,600	19,900	20,000	21,500	20,600	24,000
low	19,200	18,900	16,800	16,400	17,900	19,100	19,000
EXPEDITER							
high	28,900	27,600	29,600	24,900	29,000	30,500	30,900
median	19,900	18,700	19,000	17,800	20,500	20,400	21,500
low	16,900	15,600	17,200	14,300	17,000	16,400	18,000
TRAINEE							
high	27,500	26,800	25,000	25,200	27,300	27,100	27,500
median	18,100	19,000	19,600	15,000	18,700	20,400	22,000
low	15,700	14,200	15,300	13,900	14,800	15,300	18,200

the average age dropped from 41 to 38 years and length of experience dropped from eleven to nine years.

Many of these younger people are females on their way up. The number of women in purchasing, according to the survey findings, grew from 38% in 1985 to 42% in 1986. While most of the women in the field are clustered in the lower level jobs, a significant gain of 5% (from 8% to 13%) was noted in the number holding purchasing manager or higher positions. And pay scales for women increased by 6.4%, slightly more than the overall average for all purchasing employees. Also significant is that the findings show a much greater parity between salaries for men and women, particularly in medium and large firms.

Another positive trend is the growth of minorities in the profession. Compared to 1985's survey, minorities gained 4% of the jobs in purchasing during 1986, climbing to 19% of the total. And there was no apparent salary differential between minorities and other buyers. Minorities also made some inroads into higher management positions by taking another 3% of the jobs and raising the total to 8%.

Key salary determinants

While most of the respondents

Metal service centers	Stone, clay, glass products	Instruments & related products	Fabricated metal products	Machinery	Transportation equipment	Chemicals, allied products	Printing & publishing	Paper related products	Communications	Miscellaneous
104,500	126,000	111,300	102,900	100,800	103,000	140,000	115,000	123,000	135,000	89,900
86,700	84,000	93,100	81,500	82,300	95,000	99,000	97,000	104,500	103,600	84,400
70,200	69,100	73,600	62,400	64,200	67,000	79,900	80,500	83,700	88,500	67,000
114,000	188,000	127,500	104,300	102,500	127,500	150,000	118,000	123,400	118,000	132,400
105,900	100,000	109,000	91,400	90,300	109,900	105,900	97,500	101,000	78,000	88,600
99,300	75,400	88,700	72,000	71,500	100,000	99,300	84,600	72,300	59,700	65,000
82,000	74,000	78,200	78,000	80,200	79,500	77,000	76,000	74,100	74,000	76,700
71,000	66,500	72,800	72,000	78,500	54,000	60,000	72,500	68,000	65,000	63,600
56,200	49,000	58,900	53,600	49,000	43,500	45,800	42,000	45,000	48,700	47,000
89,600	83,400	84,500	81,300	82,500	90,000	85,000	86,000	80,500	85,000	82,000
74,400	73,000	78,400	75,000	63,700	72,500	72,000	78,400	70,000	64,900	62,900
58,900	61,600	62,700	60,000	59,000	64,800	55,000	60,000	57,700	50,000	49,000
58,000	60,800	61,000	58,970	57,500	72,000	68,000	63,000	66,000	67,000	62,500
45,300	45,000	42,000	46,300	44,500	43,700	42,600	43,900	44,000	48,700	51,500
38,700	32,300	34,900	31,900	36,000	33,600	34,800	30,900	36,300	39,000	34,300
76,000	75,500	75,000	77,400	78,500	77,500	72,000	70,500	73,000	71,300	72,500
53,700	54,000	53,600	58,000	51,500	52,000	54,600	55,000	51,000	55,000	50,500
43,000	44,700	42,800	41,500	45,000	40,000	44,000	39,500	41,500	44,000	38,500
47,500	43,500	44,000	40,700	45,500	55,000	54,700	60,500	58,000	59,800	55,000
32,600	34,900	30,500	32,000	32,500	33,500	32,500	39,000	34,500	36,000	37,500
21,000	20,000	21,000	28,500	23,500	34,800	29,500	31,000	30,000	29,000	28,500
39,000	37,500	40,500	42,000	38,400	47,000	46,800	50,000	46,000	47,500	48,000
26,000	26,500	24,800	26,500	25,900	33,700	32,500	35,900	32,500	33,900	34,000
19,700	18,000	18,900	17,900	20,400	24,000	21,000	26,600	19,000	22,000	24,800
36,000	37,500	32,000	34,000	32,500	38,000	46,000	44,000	41,000	45,600	39,600
25,300	26,300	22,200	24,400	26,000	29,500	27,300	24,900	21,200	24,400	22,100
19,000	20,000	18,500	19,000	17,700	16,700	19,300	18,700	21,100	19,600	17,400
24,700	27,500	24,000	23,500	25,800	28,500	27,500	26,900	27,000	25,900	26,700
20,500	20,000	21,000	19,900	20,900	22,300	21,500	20,900	21,000	21,500	19,400
16,900	16,800	15,700	16,000	16,500	18,000	17,500	17,800	18,300	16,900	15,200
27,000	28,000	25,900	28,000	27,500	26,900	30,500	28,700	25,500	29,000	26,000
19,000	17,500	18,800	19,500	21,400	21,700	21,700	19,600	20,800	20,500	19,000
15,900	15,700	14,000	16,000	16,300	16,900	15,600	17,200	14,300	17,000	15,900
23,700	24,300	25,000	25,500	24,000	26,200	27,800	25,500	26,400	27,000	24,000
19,500	19,200	18,500	20,700	19,000	19,500	20,000	18,900	17,600	18,700	17,100
15,000	14,500	15,700	15,000	16,000	15,000	16,200	14,300	15,900	14,800	14,900

Salaries by education

(Average of all titles in all industries)

Average years of experience for all titles in all industries = 9

VP PURCHASING
Average years of experience = 17
High School $51,000
Bachelors $74,[illegible]00
MA/MS/MBA $9[illegible],100
Technical degree $76,100

VP MATERIALS
Average years experience = 19
High School $53,700
Bachelors $82,200
MA/MS/MBA $91,300
Technical degree $87,000

PURCHASING DIRECTOR
Average years experience = 13
High School $36,200
Bachelors $60,600
MA/MS/MBA $69,200
Technical degree $62,500

MATERIALS DIRECTOR
Average years experience = 16
High School $33,900
Bachelors $59,100
MA/MS/MBA $64,600
Technical degree $60,400

PURCHASING MANAGER
Average years experience = 9
High School $27,000
Bachelors $42,700
MA/MS/MBA $48,700
Technical degree $43,000

MATERIALS MANAGER
Average years experience = 12
High School $29,600
Bachelors $44,600
MA/MS/MBA $51,700
Technical degree $48,300

PURCHASING AGENT
Average years experience = 7
High School $20,800
Bachelors $32,700
MA/MS/MBA $41,700
Technical degree $36,200

SENIOR BUYER
Average years experience = 9
High School $20,700
Bachelors $30,700
MA/MS/MBA $40,300
Technical degree $33,700

BUYER
Average years experience = 5
High School $18,700
Bachelors $28,900
MA/MS/MBA $34,600
Technical degree $30,200

JUNIOR BUYER
Average years experience = 2
High School $15,400
Bachelors $21,300
MA/MS/MBA $26,700
Technical degree $20,700

EXPEDITER
Average years experience = 4
High School $14,100
Bachelors $22,700
MA/MS/MBA ****
Technical degree $25,200

TRAINEE
Average years experience = < 1
High School $14,600
Bachelors $19,700
MA/MS/MBA $24,500
Technical degree $22,800

**** Insufficent data

(88%) said that performance was the most important factor in determining salaries and raises, there was a very high correlation between seniority and pay scales despite the fact that only 10% of the respondents ranked seniority as a significant factor in their determination of salary levels.

Education has the most impact on starting salaries, but remains important as a factor in salary levels throughout a purchasing professional's career. The study shows that on average a person with a bachelor's degree will earn about 30% more than a person with a high school education holding the same job function. And a master's degree will net about 44% more in the same job title. And MBAs are in big demand. Nearly 60% of the respondents ranked an MBA as having the greatest impact on salary and raises. A master's in anything other than business ranked just about the same as an MBA. Technical degrees for buyers slipped in popularity (to 19% from 22%) while bachelor's degrees increased (to 58% from 47%). And the Certified Purchasing Manager (C.P.M.) certification picked up

AVERAGE 1986 PAY INCREASES AND PROJECTED PAY INCREASES FOR 1987 BY INDUSTRY

	Food, tobacco, & related products %	Transportation shipping & related services %	Energy %	Electric, electronics equipment %	Rubber, plastics, products %	Textile mill, apparel, leather %	Medical, pharmaceuticals, & related products %
VP PURCHASING							
1986	5.3	5.9	6.0	5.2	6.1	5.1	6.1
1987	5.7	6.0	4.9	5.3	6.7	4.5	6.0
VP MATERIALS							
1986	5.9	6.1	5.3	6.7	7.0	4.5	6.6
1987	5.5	5.7	5.4	6.1	6.9	4.7	5.0
PURCHASING DIRECTOR							
1986	6.0	5.8	5.0	6.2	6.4	5.0	5.8
1987	5.7	5.5	5.9	6.0	6.2	4.5	5.5
MATERIALS DIRECTOR							
1986	5.9	6.2	6.3	5.7	5.9	5.2	5.8
1987	5.5	6.1	5.9	5.5	5.8	4.9	5.0
PURCHASING MANAGER							
1986	6.7	6.3	6.[illegible]	5.9	5.9	4.9	5.5
1987	5.4	6.2	5.5	5.7	5.9	4.5	5.0
MATERIALS MANAGER							
1986	6.3	5.9	6.0	6.0	6.1	3.7	5.6
1987	5.5	6.0	6.0	5.4	6.1	3.5	5.0
PURCHASING AGENT							
1986	6.1	6.0	6.1	6.2	5.9	3.6	5.4
1987	5.5	6.0	5.9	6.0	6.0	3.[illegible]	5.1
SENIOR BUYER							
1986	5.9	5.8	5.9	6.1	6.0	4.0	5.7
1987	5.2	6.0	6.0	6.1	5.8	3.7	5.0
BUYER							
1986	5.7	6.1	6.0	6.6	5.8	3.2	5.5
1987	5.8	6.0	5.9	6.2	6.0	3.3	5.6
JR BUYER							
1986	5.6	5.8	5.7	5.6	5.6	3.0	5.7
1987	5.7	6.0	6.0	6.0	5.9	3.5	5.1
EXPEDITER							
1986	5.8	6.3	5.9	5.6	5.5	3.2	5.0
1987	6.0	6.1	6.0	6.3	5.5	3.0	5.0
TRAINEE							
1986	5.9	5.8	6.0	6.3	5.4	2.9	5.0
1987	5.0	5.4	6.0	6.0	5.0	2.5	4.0

OVERALL AVERAGES			**OVERALL AVERAGES**		
(Eliminating high and low 10% extremes)	1986	6.3%	(All units)	1986	5.7%
	1987	6.0%		1987	5.5%

some (to 15% from 13%) as an influence on salaries and raises. For whatever it means, only 5% ranked a doctorate degree as an important factor.

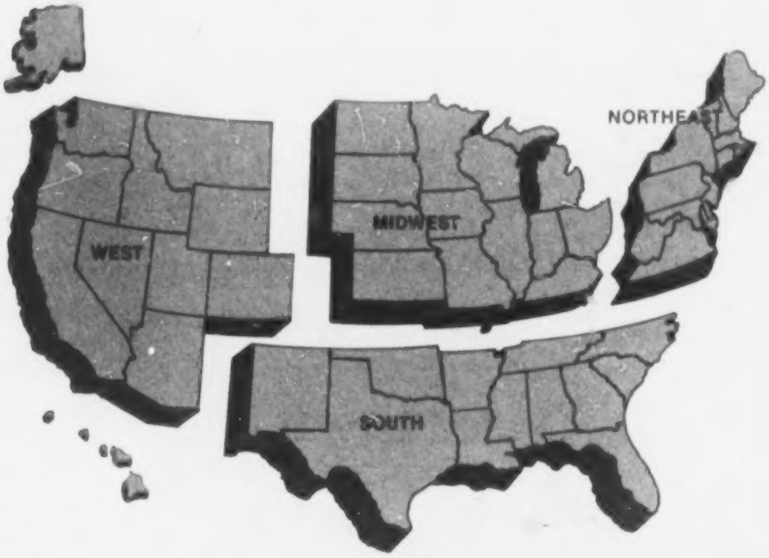
Raises and perks

In general, raises in 1987 are going to be slightly under those granted in 1986—from 5.7% overall in 1986 to 5.5% overall in 1987. But this is not true for each individual industry (see chart). And this overall figure is somewhat skewed out by some industries that were included in both the 1986 final calculations and the 1987 projections which contained figures from some depressed industries. You will note on the detailed chart of industry-by-industry projections that the textile industry, for example, is considerably lower than all others, and the communications and pharmaceutical industries are well above the average. When taken without these extremes, the overall average raise climbs slightly to 6.3% in 1986 and 6.0% in 1987. If you are making out your budget for 1986, use the 6% figure as an overall average for raises unless you are in one of the industries with extremes. A 6% increase in 1987 means that purchasing salaries will have grown more than 12% on average in two years and nearly 20% in the past three years—a clear indication that purchasing's role in corporate life is becoming more recognized and valued.

Incentives are increasing for purchasing people and they are being extended to more purchasing employees. Apparently, PMs are having some impact on their managements as more firms are adding bonuses and incentive rewards based on purchasing savings/cost reduc-

Metal service centers %	Stone, clay, glass products %	Instruments & related products %	Fabricated metal products %	Machinery %	Transportation equipment %	Chemicals, allied products %	Printing & publishing %	Paper related products %	Communications, electric service %	Miscellaneous %
6.0 6.1	6.0 5.9	5.5 5.7	5.9 6.3	5.5 5.9	5.9 5.6	6.5 6.0	6.2 6.2	5.8 5.8	5.7 5.5	6.6 6.0
5.7 5.6	5.8 5.7	6.2 6.0	5.9 6.1	4.8 5.0	5.9 5.8	5.9 6.0	6.3 6.0	6.1 6.0	5.8 6.0	5.9 5.8
5.7 5.5	5.3 5.7	6.0 6.0	5.7 5.6	5.2 5.1	6.0 5.8	5.3 5.5	5.9 5.9	5.8 5.5	6.0 6.0	5.7 6.0
6.0 5.9	5.8 6.0	5.5 5.0	5.0 5.2	4.8 4.7	6.0 5.0	5.5 5.9	5.9 6.0	5.7 5.0	6.1 5.2	5.9 6.1
5.7 6.0	5.4 5.9	5.9 5.0	5.1 5.1	5.3 5.1	5.5 5.0	5.7 6.0	5.4 5.9	5.9 5.0	5.1 5.4	6.3 5.9
5.8 5.3	5.4 5.5	6.0 5.1	5.0 5.0	4.9 5.1	5.6 5.0	5.8 5.3	5.4 5.5	6.0 5.1	5.0 5.0	5.9 6.1
5.9 6.0	5.5 5.9	5.7 4.5	5.9 5.3	4.6 4.5	5.4 5.6	5.9 6.0	5.5 5.9	5.7 5.5	5.9 5.7	5.6 5.5
5.0 4.5	4.9 4.7	5.3 5.9	6.0 6.0	4.0 4.1	5.6 5.5	6.0 5.0	5.9 6.1	5.8 5.9	6.0 5.6	5.7 5.8
5.8 6.0	5.0 4.9	5.4 5.3	5.2 5.0	4.7 4.5	4.5 5.0	5.3 5.6	6.0 5.9	5.7 5.8	5.9 5.9	5.7 5.5
5.8 6.0	5.4 5.0	5.2 5.8	5.9 5.9	4.0 4.5	5.2 5.1	5.6 6.0	5.7 5.0	5.8 5.8	6.0 5.9	5.3 4.5
5.3 5.6	4.9 5.0	5.2 5.5	5.8 4.5	4.2 4.0	5.1 5.3	4.7 5.0	5.9 4.5	5.4 5.0	5.7 6.0	5.2 5.0
5.2 5.7	5.3 5.2	4.3 4.8	6.4 6.0	4.9 4.5	4.8 5.0	5.4 5.6	5.2 5.2	5.9 5.8	6.2 6.1	5.5 5.6

tions/performance. In both the 1985 and 1986 surveys, about half of the managers surveyed noted that this was their most sought-after incentive. In 1985, only 4% of the PMs reported any type of incentive plan, but this year 8% listed such programs. In addition, other managers reported increases in the number of other incentive programs such as stock options (from 14% to 16% of the reporting companies) and straight bonuses not tied to purchasing savings (13% to 15%). Of those companies offering incentive plans, almost half reported that the plans extend to employees below management rank. This is a significant development over last year when only one-third of survey respondents indicated that lower level employees participated in these plans. While there has been some substantial increase in the incentives given to purchasing people, there has been a slight erosion of the amount of total compensation represented by nonsalary compensation such as fringe benefits. In 1985 nonsalary items constituted an average of 24% of total compensation. In 1986, it accounted for only 22%. That doesn't necessarily mean that these benefits were reduced (although, in some cases, they have been) as much as it means that they are a lesser percentage of the total, probably because of higher real wages.



PURCHASING SALARIES BY REGION

Average all industries

	Northeast	Midwest	South	West	Northeast	Midwest	South	West
VP PURCHASING					**PURCHASING AGENT**			
High average	133,000	116,000	103,000	140,000	89,000	82,000	70,000	93,000
Median	89,000	87,000	81,000	91,000	42,000	43,000	32,000	43,000
Low average	52,800	50,000	46,000	52,000	29,000	27,000	21,000	30,000
VP MATERIALS					**SENIOR BUYER**			
High average	205,900	172,000	105,000	193,000	72,000	66,000	53,000	75,000
Median	129,700	115,000	90,000	118,000	41,000	39,000	30,000	44,000
Low average	61,000	60,000	52,000	68,000	25,000	23,000	21,000	25,000
PURCHASING DIRECTOR					**BUYER**			
High average	93,000	82,000	84,000	89,000	64,000	60,000	52,000	66,000
Median	68,000	67,600	57,000	66,000	33,000	30,000	27,000	36,000
Low average	49,000	43,000	38,000	46,000	23,000	22,000	18,000	26,000
MATERIALS DIRECTOR					**JUNIOR BUYER**			
High average	134,000	116,000	92,000	105,000	39,000	36,000	30,000	42,000
Median	69,000	68,000	57,000	72,000	22,000	21,000	16,000	24,000
Low average	48,000	45,000	40,000	51,000	18,000	18,000	14,000	20,000
PURCHASING MANAGER					**EXPEDITER**			
High average	100,000	95,000	80,000	106,000	48,000	39,000	32,000	52,000
Median	52,000	48,000	40,000	54,000	24,000	23,000	19,000	26,000
Low average	36,000	36,000	32,000	37,000	18,000	17,000	16,000	19,000
MATERIALS MANAGER					**TRAINEE**			
High average	104,000	102,000	87,000	105,000	32,000	29,000	26,000	36,000
Median	58,000	56,000	53,000	62,000	22,000	21,000	18,000	24,000
Low average	48,000	46,000	40,000	51,000	18,000	16,000	14,000	20,000

High = Average of the highest 10% of salaries surveyed

Median = Range in which the largest number of reported salaries fell

Low = Average of the lowest 10% of salaries surveyed

Comparisons

The improvement in purchasing salaries and incentives is also attested to by PMs themselves. Most (79%) said that purchasing salaries in their company were comparable to other departments—that's up 20% over 1985's survey results. Only 12% said salaries were lower than other departments (down from 22% in 1985), only 9% said they were higher (down from 12% in 1985). When asked to compare salaries in their departments with comparable occupations, 88% said they were about the same (up from 63% in 1985), 11% said they were lower (down from 17% in 1985), and only 1% said they were higher (down from 12%). Another healthy sign: The number of managers who say they are fairly compensated for what they do rose to 89%—up three points over 1985—and only 8% said they were not fairly compensated.

Once again, ***PurchasingWorld***'s annual salary survey has found the purchasing profession in a very positive frame of mind and gaining ground in compensation and recognition. There is also a changing face to the profession as more women, minorities, and younger, educated people enter the field.

The survey technique

This year's survey covered 1,069

PURCHASING SALARIES BY COMPANY SIZE

(annual sales dollars)

Average all industries

	To $50 million	$50-500 million	$500 million-$1 billion	$1 + billion
VP PURCHASING				
High average	89,000	94,000	102,000	150,000
Median	69,000	83,000	88,000	100,000
Low average	55,000	52,000	49,000	63,000
VP MATERIALS				
High average	126,000	161,000	175,000	201,000
Median	68,000	84,000	91,000	96,000
Low average	43,000	52,000	54,000	60,000
PURCHASING DIRECTOR				
High average	73,000	84,000	87,000	103,000
Median	60,000	62,000	65,000	72,000
Low average	41,000	43,000	43,000	52,000
MATERIALS DIRECTOR				
High average	88,000	90,000	91,000	102,000
Median	52,000	56,000	60,000	70,000
Low average	43,000	48,000	48,000	52,000
PURCHASING MANAGER				
High average	68,000	72,000	81,000	102,000
Median	39,000	42,000	47,000	52,000
Low average	33,000	36,000	38,000	44,000
MATERIALS MANAGER				
High average	74,000	76,000	87,000	101,000
Median	50,000	52,000	63,000	72,000
Low average	40,000	41,000	40,000	52,000

	To $50 million	$50-500 million	$500 million-$1 billion	$1 + billion
PURCHASING AGENT				
High average	52,000	59,000	64,000	66,000
Median	34,000	39,000	42,000	45,000
Low average	29,000	27,000	21,000	30,000
SENIOR BUYER				
High average	52,000	54,000	54,000	62,000
Median	33,000	36,000	34,000	38,000
Low average	21,000	23,000	25,000	25,000
BUYER				
High average	44,000	52,000	52,000	56,000
Median	29,000	32,000	32,000	36,000
Low average	16,000	18,000	21,000	22,000
JUNIOR BUYER				
High average	26,000	27,000	30,000	36,000
Median	22,000	22,000	22,000	24,000
Low average	14,000	15,000	18,000	18,000
EXPEDITER				
High average	27,000	30,000	32,000	42,000
Median	20,000	23,000	24,000	25,000
Low average	15,000	17,000	20,000	23,000
TRAINEE				
High average	24,000	27,000	29,000	32,000
Median	18,000	21,000	22,000	24,000
Low average	14,000	16,000	16,000	20,000

High = Average of the highest 10% of salaries surveyed

Median = Range in which the largest number of reported salaries fell

Low = Average of the lowest 10% of salaries surveyed

firms throughout the U.S., covering 6,414 positions in 12 job titles. The survey form was mailed to top purchasing and materials management executives at all size firms across major industry groupings. This year, a listing of job descriptions was included in order to make comparisons between job titles more consistent and therefore produce more accurate results.

All data was arrayed against a variety of variables to produce results showing the average of the highest 10%, the average of the lowest 10%, and the median of the remaining 80% of salaries by job title, geographic location, and industry grouping.

The Job Descriptions Survey was mailed to top purchasing executives across all industry groupings by size of company and geographic location. Each task description was then sorted to determine the percentage of respondents who assigned the particular task to a specific title. If a task appeared more than 50% of the time, it was assigned to the specific title. Duplication of the task assignment to more than one title was unavoidable because of the general nature of the description. For example, "issues purchase orders and changes" accurately appears under several titles. In practice, the description would have to be more specific as to purchasing authority, type of product or service purchased, and other specifiers. ***PW***

Job Descriptions

For a detailed copy of the results of the Job Description Survey, send $5.00 for postage and handling to ***PurchasingWorld*** Job Survey, 6521 Davis Pkwy., Solon, OH 44139.

The "average" PM

Taking all the data collected from the salary survey and simply running averages produces a composite picture of the average purchasing manager which looks something like this:

The average PM is 63% more likely to be a white male than a women or a minority. He is 39 years old, has a bachelor's degree in business, has 11 years of experience in purchasing, and earns $51,000 a year. He reports to the vp for operations and supervises six people in a department that is responsible for spending $94 million a year for a company doing $205 million in annual gross sales. In 1986, he received a 6.8% raise and will get a 6-7% raise in 1987. He receives approximately 19% of total compensation in nonsalary compensation. He is basically satisfied with his salary and benefits.

Tax reform may spur leasing

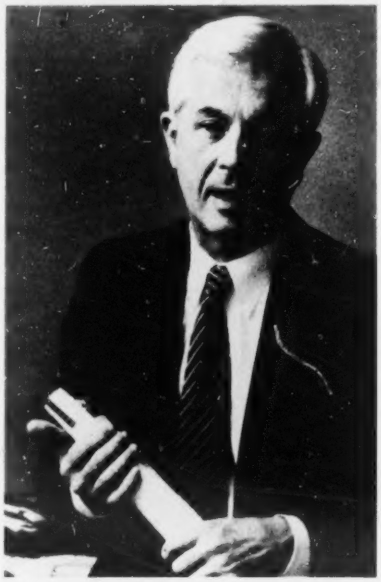
Robert S. Reichard, executive editor

Disregard talk that equipment leasing will be hurt by the new tax law.

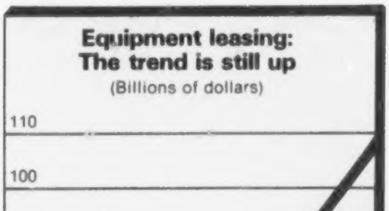
Quite the contrary. Lessors, lessees, and officials of the American Association of Equipment Lessors (AAEL) all see a continued growth in leasing, which this year totals $100 billon—more than double the volume at the beginning of the decade.

The AAEL, in an exclusive interview with *PW* gives several reasons for its upbeat appraisal:

- While repeal of the investment tax credit (ITC) and the enactment of an alternative minimum tax (AMT) will increase the cost of leasing, it will raise outright purchase costs by an equal amount.
- Only a small percentage (about 15%) of total leased equipment last year was transacted exclusively for tax purposes. Most companies, says Michael Fleming, AAEL president, lease for convenience and flexibility. This approach provides much longer terms than conventional financing, with payments tailored to fit the lessee's particular needs.



Michael J. Fleming, president, American Association of Equipment Lessors says capital-intensive companies that have to pay more taxes under the new tax bill may find leasing advantageous.



Source: American Association of Equipment Leasers, with PW estimates for 1987

- Leasing also offers off-balance-sheet reporting which plays an important role in the decision-making for some. It allows companies to show an asset as a footnote rather than as an additional debt.
- A growing number of firms view equipment lessors as asset managers providing maintenance and service rather than acting as simple financiers.
- Finally, there is no better protection against obsolescence than leasing.

AMT impact

Coming back to the new tax bill—the area of immediate concern for companies contemplating new capital equipment: An AAEL survey of lessors finds that many feel that capital-intensive companies which previously were able to take tax deductions by purchasing equipment now will find that with too many depreciation preferences, they will be in the minimum tax position and will have to pay more taxes.

Peter Nevitt of BankAmeriLease Companies, San Francisco, CA, believes defense companies will become new customers for lessors because they will be using new accounting procedures which will force them into an AMT position and make leasing attractive. Nevitt says some equipment types will do better than others—those with asset lives of five to seven years will be more competitively priced.

Ian J. Berg of Copelco, Pennsauken, NJ, believes leasing will increase in the middle market ($50,000-500,000), also due to the AMT. "Companies want to eliminate having too many preference items to avoid falling into the AMT," he says, echoing the beliefs of many lessors across the U.S.

Berg also believes small ticket transactions (under $50,000) will remain as strong as ever. He expects the healthcare market to improve considerably. In addition, Berg said that the elimination of tax exempt bonds will diminish competition in the healthcare market, and likely result in increased activity there.

The lessee will benefit even more if he finds a lessor which is not falling into the AMT position, notes Norman Chapman, Security Pacific Leasing, San Francisco, CA.

No change in plans

Not surprising, the AAEL finds that most lessees aren't changing their plans to acquire equipment. Those companies acquiring "small ticket" equipment usually didn't lease for tax reasons in the past, so their plans for the future shouldn't be impacted. BankAmeriLease's Nevitt believes companies that leased for tax reasons still will find some tax benefits. "They just won't be as great," he says.

Big lessees seem to agree. "We'll go through the steps we always have gone through in the past," says John Edwardson, Northwest Airlines executive vice president. "The key for us in the new bill is the new minimum tax. As a result of that, it appears, initially, that leasing will be more necessary for us rather than less."

Another lessee, Union Labor Life Insurance, leases about 80% of its data processing equipment strictly to avoid obsolescence. The tax bill doesn't change that.

Dick Reide, vice president of Union's information management division, notes, "There's a point in the life of equipment where it's smart to buy; the idea is to maximize the life of the machines in your particular set-up. What you have to do is tie your long-range plans in with your procurement plans so you'll have the capacity to upgrade."

National Car Rental leases its computer and disk equipment, but purchases printers and other larger items. The decision is based on "pure economics," says David Johnson, corporate vice president.

"The process is relatively simple. We look at the useful life of the equipment at our location. We do a purchase/lease analysis, comparing the cost to buy, plus interest, minus the residual value, and we compare that to the lease rate for the same period," Johnson explains.

One thing lessors like about the new tax bill is that it will bring leasing back to a "truer" form that is based on sound economic reasons .

For more information from the AAEL **Circle 162** ***PW***

Leasing before and after tax reform: two examples

James M. Johnson, Ph.D.,
Mark Financial Services,
Arlington, MA

The most significant aspects of the Tax Reform Act of 1986 on equipment financing are the rescinding of the investment tax credit (for the third time in the last 20 years), the new cost recovery classes for depreciation purposes, and the alternative minimum tax (AMT).

▪ **The ground rules.** To illustrate the effects of tax reform on leasing, two transactions will be considered from the standpoint of both lessor and lessee. For the regular tax system, the new 34% tax rate (effective July, 1987) and 200% declining balance to straight-line over the cost recovery class life are used with the half-year convention. In addition, the AMT calculations include the additional taxes due on the spread between book and tax income as required by the new Act.

▪ **Example I.** Consider equipment with a cost of $100,000 to be leased over a ten-year term. The equipment has a five-year life under the Deficit Reduction Act 1984 (DEFRA), a five-year depreciable life under the 1986 Act, and a five-year life if the equipment owner is taxed under AMT (e.g. semiconductor manufacturing equipment and electric utility nuclear fuel assemblies). The lessor prices the lease to earn the same economic rate of return in each case, can borrow at 11%, and finances in each case with 70% debt and 30% equity financing.

To simplify the analysis, annual cash flows and operating lease accounting are assumed throughout. Before the 1986 Act, the annual rent charged would be $23,247 if the ITC accrued to the lessor—call this the *base rent*. If the ITC were unavailable or passed to the lessee, the rent (again before the Tax Reform Act) would be $26,800, or 15% higher than the base rent. Under tax reform, the lessor would require rent of $25,811 (11% higher than the base rent) if taxed as a regular taxpayer and $25,648 (10% higher than the base) if taxed under the AMT. These results indicate that the major influence on rents is the ITC. And under the Tax Reform Act, it does not make much difference which tax system the lessor is under (regular or AMT).

A lease/buy analysis for the five-year lease under tax reform, assuming the equipment user can borrow funds at 11%, yields different results depending upon whether the equipment user is a regular or AMT taxpayer. If the user is a regular taxpayer, the net present value advantage of leasing over buying is $23. If the user is an AMT taxpayer, the advantage of leasing increases to $1,087. Thus, for equipment which has a similar depreciable life under either regular or AMT tax systems, an AMT asset user will find leasing more profitable than buying (or less unprofitable).

▪ **Example II.** This time around, there is a large spread between the equipment's depreciable life under the regular tax system as opposed to the AMT. All assumptions here are the same as the example above, except the equipment is now presumed to be leased over a ten-year term and to have a five-year depreciable life under the regular tax system and a nine-year life under the AMT (e.g. buses and CATV program origination equipment).

In the second example, the lessor would require an annual rent of $13,211 (the new base rent) with ITC retained under the 1984 Act. This rises to $15,402 (17% higher than the base rent) under the 1984 Act, if the ITC is unavailable or passed to the lessee. Under the 1986 Act, the rent required is $15,498 (17% higher than the base rent) with the regular tax and $16,434 (4% higher than the base rent) under the AMT. Here, in addition to the importance of lost ITC noted in the previous example, it makes a significant difference whether the lessor is a regular or AMT taxpayer under the 1986 Act.

A lease/buy comparison under the second example results in an advantage to buying the equipment in the amount of a $3,764 present value savings if the user is under the regular tax. However, the advantage flips to leasing for a present value savings of $1,897 if the user is under the AMT. Thus, for equipment with significantly longer AMT depreciable lives (than regular tax lives), equipment users will find leasing more attractive (less unattractive) if they fall in the AMT.

Equipment users which will find leasing most attractive will be those finding themselves on the AMT (or trying to avoid the AMT by not creating tax preferences) and acquiring equipment which has a significantly greater ADR midpoint than its cost recovery class.

FLUID POWER

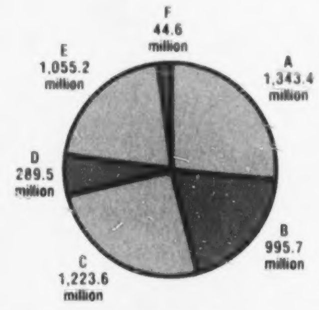
Pressure up on fluid power

Robert R. Blumel,
managing editor

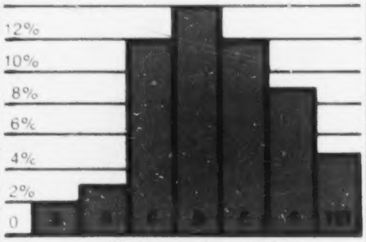
The fluid power industry is facing some tough challenges from technological advances, foreign competitors, and a shrunken marketplace. As National Fluid Power Association (NFPA) chairman Theodore Duncan points out, the industry is being confronted with a swing away from fluid power systems controls to electronic controls and abandonment of fluid power completely in favor of electrical systems with electronic controls.

Fluid power product shipments

Reported in Current Industrial Report MA-35N



Total—$4,952.0 million



% change from 1984

A-Hydraulic and pneumatic valves
B-Fittings and assemblies for tubing and hose
C-Hydraulic and pneumatic cylinders, actuators, accumulators, cushions, non-vehicular shock absorbers
D-Hydraulic and pneumatic filters
E-Hydraulic pumps, motors and hydrostatic transmission components
F-Pneumatic (air) motors and motor packages

Source: NFPA

Duncan, who is president of Vickers Inc., a Trinova Company, says that the once American-dominated world market has given way to intense worldwide competition from European and Far East manufacturers that got the jump on domestic manufacturers with smaller, lighter, quieter, and cooler running systems. And they have been successful at penetrating the American market.

Like a lot of industries, the fluid power industry has been hurt by the shrinking manufacturing base. Duncan notes that customers have disappeared in almost every machinery market. And those that remain are not building as much as they did, nor are they buying as much.

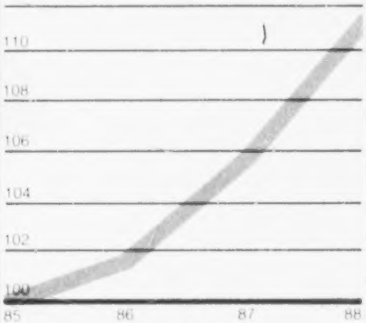
But the industry is meeting these challenges with upgraded technology and systems engineering approaches. The use of systems engineering to meet the challenge of electrical systems is one trend that surely will continue to pick up steam. The marriage of electronic controls to fluid power systems and the improvement of fluid power component technology are two important developments that the industry sees as promising.

Duncan points out that the industry has also been successful at miniaturizing pumps and valves, getting more power output, higher pressures, and lower costs. These efforts are permitting domestic producers to compete head-on with electrical systems.

The future, in Duncan's view, is in motion control. He feels the term "fluid power" is not sufficiently descriptive of the nature of the industry any more. "If we are able to handle fluid power, electronic controls, and electrical equipment, and we tell our customer the best solution is a fluid power system, we are credible because he knows that we can give him the electrical system as well."

...continued

Forecasts for shipments of fluid power products



Source: National Fluid Power Association

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FLUID POWER

The outlook

Overall, the industry is fairly optimistic about the future. A recent national industry outlook survey conducted by NFPA shows that manufacturers expect shipments to rise by 1.5% in 1986 over 1985 and to perform even better in 1987, with a 3.9% increase, and in 1988, with 5.2%.

The cheeriest expectations are from the manufacturers of hydrostatic transmissions for mobile use who project a 6.8% increase for their sector in 1987. They are closely followed by sealing device manufacturers who see a 6.0% rise in shipments, and by the industrial power unit manufacturers who expect a 4.8% rise. The lowest projection comes from the mobile hydraulic valve makers who expect only a 2.1% advance.

The biggest headache that manufacturers see, according to the survey, is foreign competition. But, if Duncan's view is anywhere near accurate, the industry is doing more than holding its own to meet this challenge. Many companies have set up offshore operations and are taking advantage of offshore technology to stay competitive. And the domestic producers are keeping prices competitive through greater efficiencies, systems approaches, and new technology. ***PW***

New SICs for fluid power

The revision of the Standard Industrial Classification System now includes three separate codes for fluid power. The new SICs, which will be effective January 1, 1987, are as follows:

SIC 3492—Fluid power valve and hose fittings (formerly 3494)

Fluid power aircraft valves and fittings (formerly 3728)

SIC 3593—Fluid power cylinders and actuators (formerly 3599)

Fluid power aircraft cylinders and actuators (formerly 3728)

SIC 3594—Fluid power pumps and motors (formerly 3561)

Fluid power aircraft pumps and motors (formerly 3728)

Speed changers (formerly 3566)

Fluid power filters (formerly 3569)

Fluid power aircraft filters (formerly 3728)

The advantage of these changes is that only fluid power products are included in the new codes. Before this, some of the old codes included other items. For example, industrial valves were included with fluid power valves.

Producer Price Index—fluid power

Fluid power equipment rose 1.7% between August 1985 and August 1986. For the year, pumps rose by 1.1%, valves rose by 1.7%, and cylinders rose by 2.3%. This stable trend is expected to continue.

PRODUCT	AUG 1986	JUL 1986	AUG 1985
Machinery & equipment (SIC Code 35)	**102.1**	**102.0**	**101.2**
General purpose machinery & equipment (SIC Code 356)	**103.1**	**103.0**	**101.8**
Fluid power equipment (BLS Code 1143)	**269.8**	**268.8**	**265.2**
Air compressors/ stationary (BLS Code 114103)	**238.8**	**238.8**	**238.4**
Air compressors/portable (SIC Code 3563115)	**104.7**	**104.8**	**104.0**
Pneumatic hand tools (SIC Code 35462)	**127.8**	**127.9**	**121.3**
Hydraulic fluid power pumps	**102.6**	**102.6**	**101.5**
Gear type	98.0	98.0	96.7
External	102.7	102.4	100.9
Internal	87.1	87.7	87.1
Axial piston variable	104.5	104.5	103.8
Fluid power valves	**106.9**	**106.9**	**105.1**
Hydraulic valves	105.0	105.0	104.1
Manual directional control	104.6	104.6	104.6
Other directional control	100.1	100.1	100.5
Flow control (including check valves)	106.1	106.1	100.1
Servovalves & combination valves	108.9	108.9	107.0
Other hydraulic valves	115.5	115.5	113.3
Pneumatic valves	111.3	111.3	107.4
Pressure control	111.5	111.5	108.2
Other pneumatic	110.1	110.1	107.0
Cylinders, accumulators, cushions & shock absorbers	**103.6**	**102.5**	**101.3**
Hydraulic cylinders	102.1	102.1	101.3
Telescoping	102.1	N/A	102.1
Tie rod	N/A	104.7	102.7
Pneumatic cylinders	N/A	104.5	101.5
Tie rod	N/A	103.3	102.7
Shock absorbers (not for vehicle suspension, hydraulic & pneumatic)	N/A	N/A	100.9
Fluid power hose & tube fittings	**107.9**	**107.1**	**106.1**
Fittings for metal/plastic tubing	106.5	106.5	106.1
Hose end fittings & hose assemblies	108.6	107.4	106.1
Other hose connectors	109.6	109.6	104.8

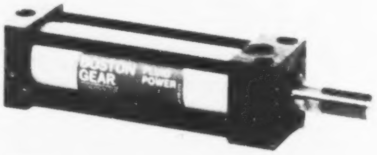
Producer Price Index information reproduced above is provided by the U.S. Department of Labor, Bureau of Labor Statistics.

N/A - not available

For more information regarding the PPI, contact Stephen Latin-Kasper, NFPA Senior Statistician, (414) 778-3358.

Check it out

✓ The NM 3196 non-metallic process pump handles severe corrosives and conforms to the dimensional requirements of ANSI B73.1. The wet end parts are made of a high-strength molded material for high corrosion resistance and temperature capabilities to prevent wicking of pumpage and delamination. *Goulds Pumps Inc.* **Circle 40**



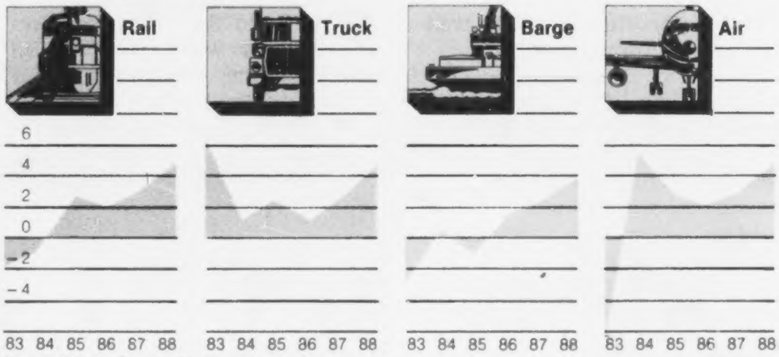
✓ Weight and cost savings are generated by the aluminum construction of a new line of pneumatic and hydraulic cylinders. The series A10 cylinders are NFPA/JIC interchangeable and come in eight standard bore diameters. A small bore line is also available. *Boston Gear.* **Circle 83**

✓ Constructed of corrosion resistant CPVC, the series HD (horizontal diffuser) pumps are designed for higher pressure applications where metallic pumps are not acceptable. They can handle flow capacities to 104 gpm with pressure up to 150 TDH. *Filter Pump Industries.* **Circle 53**

Slow movement in transportation

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

The news continues to be good for transportation buyers. New statistical revisions show that recent rate increases were somewhat lower than previously estimated. More important, estimates of future rate hikes are also being toned down.

As for the recent past—revised numbers show that last year's overall average rate increase came to only 1.9%—down significantly from the previous 2.8% estimate. And for 1986, only a 1.2% overall boost is seen—less than half the estimate of just three months ago.

Why have these rate boosts been downgraded so significantly? Wharton economists, in their latest quarterly rundown prepared exclusively for ***PurchasingWorld***, cite several factors: lower than anticipated energy costs, lackluster demand (industrial production will rise by less than 1% this year), and more-than-ample carrier capacity.

And there isn't likely to be any radical acceleration next year. The average freight increase may be a bit higher than in 1986 (Wharton pegs it at 2.7%). But it is still under the previous 3.3% estimate for 1987.

Even 1988 looks fairly good. Forecasts call for about a 3% increase in industrial production, and energy costs are expected to begin rising again. The average rate increase is put at only 4.2%.

The intermodal movement

Also worthy of note is the continued meshing of rail and truck services. The latest move toward intermodalism: Union Pacific's decision to buy Overnight Transportation Co., the nation's fifth largest freight trucking outfit. Similar moves include Burlington Northern's purchase of six motor carriers over the last three years and the Interstate Commerce Commission's review of the proposed purchase of North American Van Lines by Norfolk Southern Corp.

The effect of intermodal consolidations like these on transportation prices is hard to gauge. While customers who take advantage of both modes in a given freight run may receive price breaks because the truck and rail lines are affiliated, the reduced competition will likely provide some offsetting upward pressure on prices.

With these trends in mind, here's a more detailed mode-by-mode rundown:

- **Rail:** Ton-miles fell 0.3% (to 624 billion) in the first 37 weeks of 1986, according to the American Association of Railroads. But some late 1986 economic recovery could put the total back into the plus column for the year as a whole—but only barely. Piggybacking is about the only buoyant area here—with year-to-date traffic running close to 9% above year-earlier levels.

Because of the lackluster overall performance, rate increases this year will only be around 2.0%—actually under last year's newly revised 2.4% reading. But increasing economic activity (and hence rail traffic) next year will permit about a 2.9% increase. And rising output costs will intensify this trend in 1988 when prices are projected to rise 4.3%.

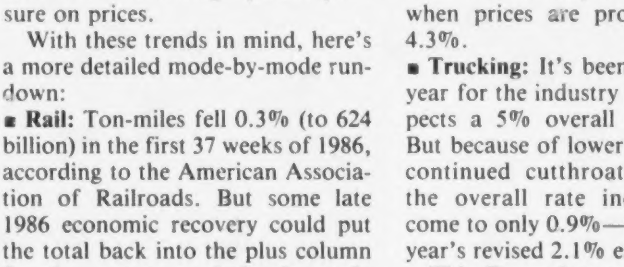
- **Trucking:** It's been a fairly good year for the industry which now expects a 5% overall tonnage gain. But because of lower fuel costs and continued cutthroat competition, the overall rate increase should come to only 0.9%—well under last year's revised 2.1% estimate.

This figure, however, is expected to accelerate to 2.7% next year and to 4.3% in 1988. But both these later estimates are fractionally under those made just three months ago.

- **Barges:** Overcapacity, which has spawned discounting and a net decline in prices since 1982, continues

PurchasingWorld freight rate index

(1982 = 100)



Increase over previous year

1979	12.6%
1980	14.9%
1981	10.7%
1982	2.7%
1983	2.9%
1984	0.4%
1985	1.9%
1986	1.2%*
1987	2.7%*
1988	4.2%*

*Estimated

to be a problem. But the glut is finally beginning to diminish. Operators have been scrapping between 300 and 500 units annually.

Rates, which dropped 1.5% last year, are projected to edge up 1.6% in 1986. Further acceleration is seen for next year and in 1987 when quotes are expected to rise 2.4% and 3.7% respectively. But that would still leave this mode with the lowest rate of increase among the major transportation services.

- **Air:** Freight traffic has fared quite well so far this year—rising about 12% above comparable 1985 levels. But rate hikes are being held down by price wars and lower energy costs. The average 1986 advance is expected to be only about 2.1%. Some slight acceleration is expected for 1987 and 1988 when advances are projected at 2.9% and 4.4%.

PW

Skyway cuts cross-country shipping costs

Skyway Freight Systems Inc. is now offering a four-day, transcontinental, less-than-truck-load (LTL) Express Truck air-ride service as an alternative to air freight. Designed to reduce shipping costs, the service also provides computerized freight tracking.

Express Truck customers have real-time access to the status of in-transit shipments via their desktop computers or by telephone to Skyway. This allows customers to upgrade or downgrade shipments to faster or slower transit times, depending on requirements or priorities. For more information **Circle 323**

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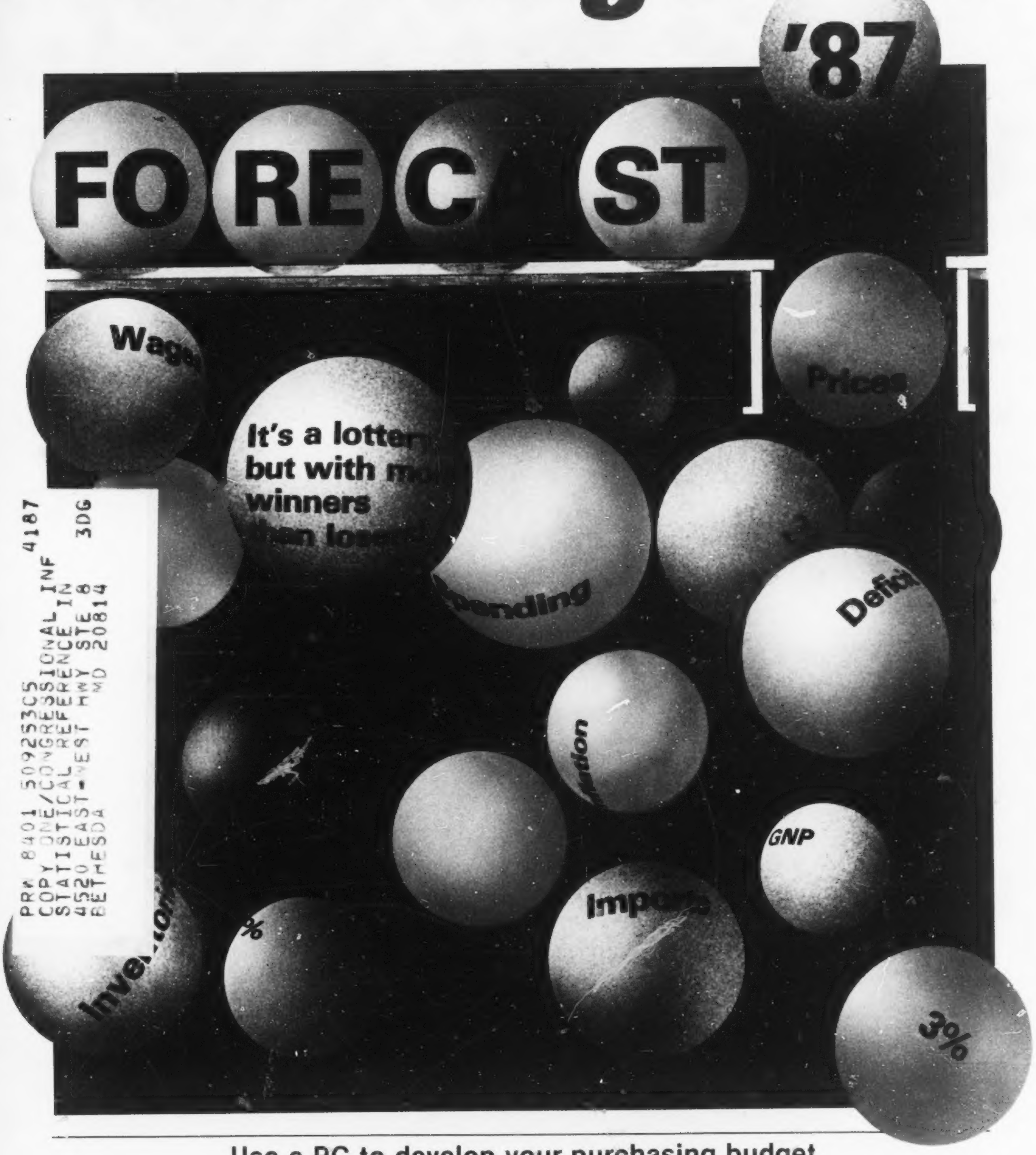
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Special report: Forecast '87

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Cover art by Terri A. Kabat

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PW PREDICTS

Robert S. Reichard, executive editor

Don't worry about inflation

Figure on another year of price stability. That's the unanimous feeling among all sources queried in *Purchasing World*'s forecast for 1987.

There will be some price increases, but they're expected to be quite modest. The average advance should not be much more than in 1986—provided you subtract last year's distorting influence of tumbling oil prices.

This is actually quite a performance when you consider that we're now entering the fifth consecutive year of business expansion—a time when inflationary pressures have historically begun to emerge.

Why the difference this time? Read through *Purchasing World*'s forecast section, and four factors seem to be playing inflation-moderating roles:

- **A relatively slow growth pattern:** Complaints abound about the mediocre 2.5% rate of GNP advance this past year. But this can be regarded as a positive factor in the war against inflation.
- **The absence of bottlenecks:** Closely tied to the slow growth pattern noted above, it also reflects better planning and the increased availability of supplies from abroad. The current 79% U.S. factory operating rate would attest to ample supply.
- **The benign labor situation:** *Purchasing World*'s Dr. Louis J. Paradiso feels that unit labor costs—a key determinant of overall price trends—will rise by only 2% in 1987. That's not much above the 1% figure for 1986. Behind this surprisingly good showing: the combined impact of weakened union strength and modest productivity gains. On the latter score, factory efficiency has been growing at a 3% + rate.
- **The absence of a big "outside" shock:** Continuing softness in the oil market can't be underestimated as an inflation inhibitor. And this trend is likely to continue. Then, too, bumper food crops over the past several years have helped hold down the cost of living.

And when the shocks have occurred, their impact has been quite small. Thus Wharton Econometric's Dr. Nariman Behravesh, in referring to the recent weakness in the U.S. dollar, figures that this will add only 0.5% onto the overall inflation rate by the end of 1987.

Given the above, it's easy to see why price analysts, the big econometric forecasting models, and purchasing executives are all optimistic about holding the line on inflation. Two independent surveys of the latter group are particularly encouraging. Specifically, 1) *Purchasing World* readers are calling for only about a 3% rise in the cost of goods and services they will buy this year, and 2) the vast majority of members making up the N.A.P.M. Business Survey Committee see small rather than large increases in the months ahead. Most of these hikes will be selective.

There is nothing to indicate that 1987 will be the last of a series of non-inflationary years. Indeed, the econometric models referred to earlier are almost as optimistic about 1988—putting the average advances in the GNP deflator and producer prices at 4%.

Energy outlook

It looks like a mixed year for energy users.

A new study by the Department of Energy, for example, suggests close to 25% boosts over the next 12 months for both #2 heating oil and utility natural gas. Gasoline could be up by more than 10% but coal and electricity should just barely inch ahead.

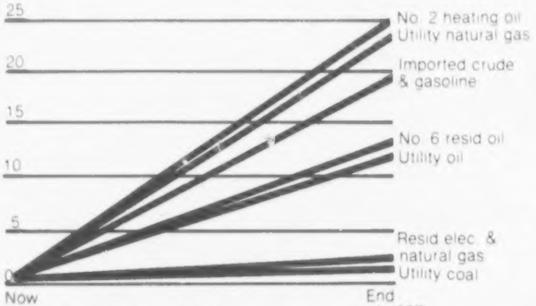
Here's a detailed rundown, premised on an $18/barrel imported crude oil price by the end of 1987.

- **Gasoline:** Figure on paying about $1.02 (average for all grades and services) by 4Q 1987.
- **#2 heating oil:** A 25% jump on the wholesale level would put tags in the 55¢/gallon range by the yearend.
- **#6 residual oil:** Government equations point to a late 1987 price near $17.10/barrel.
- **Natural gas:** Big differences are anticipated—depending upon the market. Thus residential rates will move up only 2% (to $5.74/mcf) by late 1987. But utility rates will zoom up 24% over the same period.
- **Coal:** Utility costs will remain low with only a 1% rise—bringing quotes up to only $1.61/million BTU in late 1987. This is only about half as high as tags on competing utility oil and natural gas.
- **Electricity:** There's good news on the residential front—only a 2% price increase is projected for 1987.

The new report also suggests a modest increase in overall U.S. energy consumption—up 2.4% in 1987 vs. only 0.4% in 1986. But oil will move the other way with only a 1.4% increase.

Energy tabs through 1987

(% increase)



Source: Department of Energy

Steel

CURRENT SITUATION: The USX strike is injecting bullishness into a sluggish market. The strike has permitted spot prices to rise 3% since mid-1986. **More small boosts are likely for flat rolled carbon products, some heavy structurals and plate lines, and stainless sheet.** But final 1986 consumption figures are disappointing—domestic usage was about 87 million tons—vs. 94 million tons in 1985. Shipments, too, dropped from 73 million tons in 1985 to 71 million tons in 1986.

DEMAND: Domestic consumption could slip even more this year—to 84-85 million tons. The drop in domestic shipments could be less precipitous—as import quotas become increasingly effective. In 1986 imports accounted for less than 23% of the market vs. 25% + in 1985. Any overall 1987 shipment gains seem impossible—**as key auto, machinery, and construction markets level off or even fall a bit.**

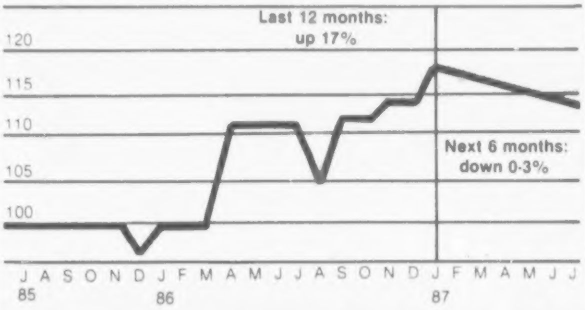
SUPPLY: There's excess—not even the USX strike can create a serious bottleneck. The industry's low 55-60% operating rate helps, as do imports. **Long-term prognosis is for better market balance**—as shipments level off to 70 million tons and additional capacity is retired. Capacity for 5.7 million tons of raw steel was shut down in 1986, and more closings are ahead. One analyst foresees another 20% reduction over the next 10 years.

PRICE OUTLOOK: Current firmness could soften once the USX strike is resolved and USX recoups lost business. Mid-year price averages could be slightly under current levels. Lower-cost producers (restructured integrated mills, non-integrated producers, and foreign sellers) will account for about 60% of the domestic market in the years ahead and will hold down longer-run advances. **Increases over this period will remain about 4%**—in line with the overall industrial inflation rate.

Steel market price

(cold-rolled sheet)

Index: June 1985 = 100



Trucks

Japanese producers are attempting to hold the line on prices as much as possible in an all-out effort to expand their share of the medium-sized market. Despite the strong Japanese yen, some Far Eastern manufacturers have not moved tags up at all on trucks in the 10,000-33,000 lb range. True, Hino Diesel Trucks (U.S.A.) has posted a small 2.9% increase. But this is offset by making previously optional equipment standard. While other truck producers have moved tags up 5%, they say that this will be it for the year.

Freight Rates

(% change)

	1986	1987
Rail	−4.5	−0.5
LTL	+3.0	+3.0
TL	+1.0	+1.5

Source: Standard and Poors

Freight rates

New predictions by Standard and Poor's tend to confirm *Purchasing World*'s own forecasts that 1987 will be a year of very little price movement. In the case of Class I railroads, the big research outfit actually sees revenues per ton-mile falling another 0.5%—on top of the 1.3% and 4.5% declines of 1985 and 1986, respectively. The S&P projections for truck quotes aren't that bad—forecasts call for only 1.5% and 3% boosts on TL and LTL shipments. That's a carbon copy of last year's small increases.

Aluminum

A slightly more bullish outlook seems to be shaping up here. New forecasts suggest about a 2.5% increase in global consumption for 1987—better than the 0.2% decline estimated for 1986. Another firming sign: world stocks dropped by about 420,000 tons in 1986. This could mean higher prices, but no big runup in expected. If market trends follow their projected path, however, merchant ingot could be commanding 60¢/lb by sometime after midyear—up about 7¢/lb from recent low levels.

Zinc

The trend is down—about 3¢/lb was shaved off producer prices in late 1986. It's in sharp contrast to the past year when the plating and alloying metal shot up from a low of 34¢/lb to as high as 47-50¢/lb. Reasons for the current weakness: 1) less-than-sensational demand by the auto and construction markets, 2) the sharp discrepancy between LME and U.S. quotes, and 3) the recent ending of a long Canadian strike. But any decline below the 40¢/lb mark seems quite unlikely—especially in view of low user and producer inventories.

Polypropylene

A new round of price hikes could be shaping up as existing tags begin to

PW PREDICTS

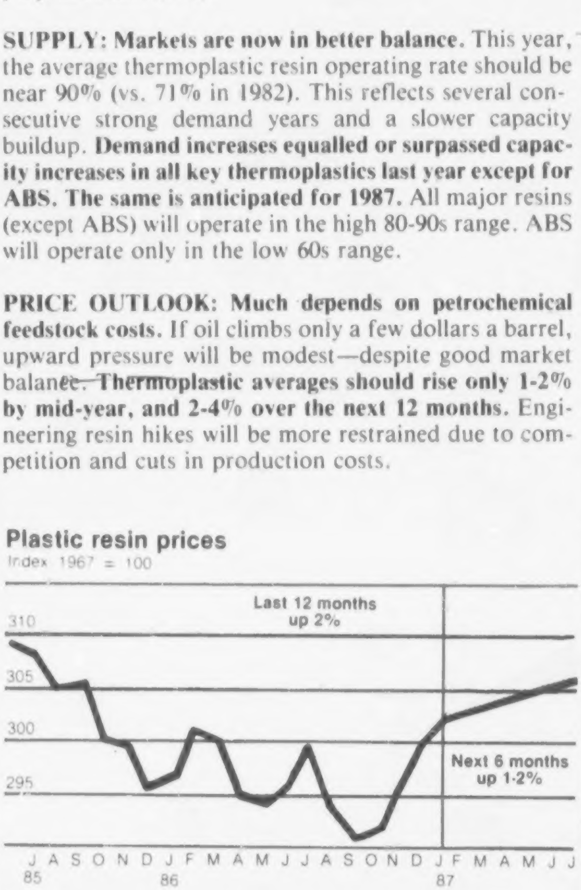
Plastic resins

CURRENT SITUATION: Another new record was set in 1986. Nearly 34.5 billion lb of thermoplastic resins cleared the market—up 5-5.5% from 1985. **Biggest gains were in polypropylene and PVC, up 9% and 8%.** But every type ended up in the plus column. **Prices have also begun to pick up after the drop in early 1986 due to tumbling petrochemical feedstock costs.** Increases have hit both high- and low-density polyethylene, polystyrene, PP, and PVC. More hikes are expected this quarter.

DEMAND: Look for a 5-6% increase in thermoplastics for 1987—twice as fast as overall economic growth. The gains will be uneven—individual resin increases are as follows: LDPE (3%), HDPE (6%), PP (8%), PS (6%), PVC (5%), and ABS (5%). The prognosis is bullish through 1990. And engineering plastics will do even better. A recent study suggests these synthetics will rise 8% a year through 1990—the biggest annual gains will be for polyester (12%), polyphenylene sulfide (11%), and polycarbonate (9%).

SUPPLY: Markets are now in better balance. This year, the average thermoplastic resin operating rate should be near 90% (vs. 71% in 1982). This reflects several consecutive strong demand years and a slower capacity buildup. **Demand increases equalled or surpassed capacity increases in all key thermoplastics last year except for ABS. The same is anticipated for 1987.** All major resins (except ABS) will operate in the high 80-90s range. ABS will operate only in the low 60s range.

PRICE OUTLOOK: Much depends on petrochemical feedstock costs. If oil climbs only a few dollars a barrel, upward pressure will be modest—despite good market balance. **Thermoplastic averages should rise only 1-2% by mid-year, and 2-4% over the next 12 months.** Engineering resin hikes will be more restrained due to competition and cuts in production costs.



Plastic resin prices

Index 1967 = 100

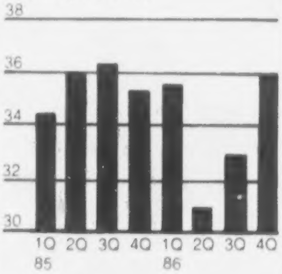
firm. More important, supplies have become quite snug as producers operate in the 95% range. Finally, demand continues to boom—another 8% gain is seen for this year on top of the big 9% advance in 1986. Best bet for prices: a 33-37¢/lb quote for the homopolymer grade within a few months—up 2-3¢/from levels prevailing as recently as last month.

Lead

Markets continue to hold up as lead moves in the relatively high 27.5-29¢/lb range. This is up significantly from the 18¢/lb low prevailing less than a year ago. Behind the buoyancy: 1986 strike interruptions which, combined with a 1.3% increase in global consumption, created a 95,000 metric ton shortfall. But with strikes over, the imbalances should gradually disappear. Indeed, combined with a seasonal drop in demand from battery makers, a few cents could be shaved off the going price by as early as spring.

Copper

The red metal still seems unable to work up a head of steam. U.S. producer prices have been backing and filling in the low to mid-60s range since early last summer. And there's nothing to suggest anything different over the next few months. Beyond that, tags could begin to firm a bit—as U.S. inventories remain at their lowest point in more than a decade. On the other hand, there's still plenty of excess capacity around—and competition should remain keen. Witness, for example, U.S. producers offering caps over Comex quotes in the neighborhood of only 2-4¢/lb.



Polystyrene

General purpose

(Market price ¢/lb)

Polystyrene

Look for new price-boosting attempts on top of last fall's boost which lifted the general purpose/crystal grade up 3¢/lb into the 35-37¢/lb range. If increases do not stick over the next month or two, they probably will later on in the year as demand rises 6%—at a time when capacity is being pared about 2.5%. Keep in mind that with operating rates expected to average in the 87% range, producers will have a lot more leverage than they did in early 1986 when utilization rates were only in the 70-75% range.

Chloralkalis

Prices are moving up. Off-

PW PREDICTS

Paper availability

Don't worry about paper availability this year—or in 1988 or 1989. There should be enough to go around according to a new American Paper Institute (API) survey.

That study shows a 2.3% increase in overall production potential for 1987—not much under the increase in consumption which, according to Norma Pace, API vp and economist, should be up by about 3%.

Capacity increases planned for 1988 and 1989 should be somewhat smaller at 1.8% and 1.3%. But this, according to Mrs. Pace, is subject to upward revision.

API figures indicate that the original estimates of recent years have generally tended to rise as time went by. Thus final 1984, 1985, and 1986 capacity figures turned out to be 0.2%, 0.7%, and 2.1% above the levels first suggested.

All this is not to say that certain areas won't be a bit snug. Linerboard producers, for instance, could be operating at close to 100% of capacity this year. But this is manageable since capacity rates are predicted on specified operating parameters. One API spokesman explained "there should be enough paperboard to go around if buyers don't panic."

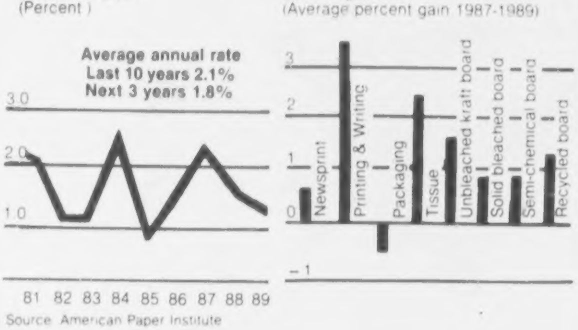
More assurance comes from the fact that there are a growing number of so-called swing kraft paper plants which can switch to paperboard if market conditions warrant.

On the other hand, it would be unrealistic to expect a return to the buyers' market of recent years. Increases in unbleached kraft paperboard capacity are now expected to average only 1.6% a year over the 1987-1989 period.

The situation is a bit different in printing and writing paper grades where capacity gains through 1989 should average 3.5% annually.

While API won't comment on prices, a report on profit margins does seem to suggest some modest upward pressure in the quarters immediately ahead. After-tax margins on sales at latest report were put at only 4.9%.

Paper and paperboard capacity



Source American Paper Institute

list chlorine is now being boosted $10/ton—with average prices expected to move up close to $150/ton. That would be about $20/ton or 15% above year-earlier levels. Even bigger $15-25/ton boosts have been announced on co-product caustic soda. But the latter increases could run into some flak because of still-high inventories and import competition from Europe. In any event, the Midwest is regarded as the most likely area where a caustic boost might hold.

Computers

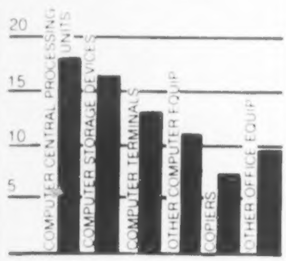
Demand for portables could more than double over the next 12 months. InfoCorp, a California-based hi-tech research firm, projects that nearly 750,000 units will clear the market in 1987—109% above last year. Behind the big gains, which can be expected to continue through the end of the decade, are a number of factors including improved display quality, increased functionality, lower weight, increasing availability of software, more compatibility with desktops, longer battery life (up to 10 hours on some models), and falling prices (tags on some models have been cut in half over the past year).

Benzene

The key petrochemical building block is on the rise again—prodded by some good derivative demand gains (especially from styrene), and recent production interruptions. Result: The spot price is approaching $1/gallon vs. only 85¢ as recently as this past November. But this should be it for a while as additional production from previously idled merchant hydrodealkylation capacity begins to hit the market.

Office Equipment

(% increase in dollar output)



Source Henderson Ventures

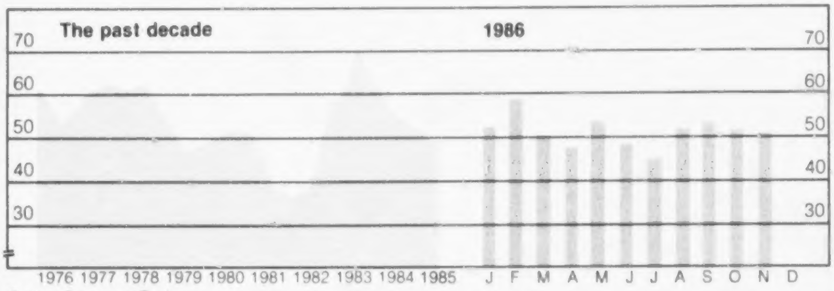
Office equipment

Markets should rebound strongly this year—with dollar output scheduled for a hefty 14% + rate of gain—a major turnaround from last year's 6% decline. And an even bigger 16% production gain is anticipated for the following year (1988). The new projections by Henderson Ventures suggest biggest advances will be in central processing computer units (up 18.7%)—thanks mainly to the revival of mainframe demand. Other impressive 1987 gains are seen for storage devices (16.8%), computer terminals (13.5%), copiers (7.6%), and a catch-all category that includes other office equipment and retail electronics (9.5%).

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept

KEY ECONOMIC TRENDS

Copycat quarters will tiptoe in

The next two quarters are likely to be carbon copies of the last few—with weak gains in some areas and other sectors doing little more than marking time.

There should be enough strength to keep GNP in the plus column, however. Indeed, this strength is already quite apparent if you want to believe the N.A.P.M. Business Barometer (see chart above). This time-tested indicator of activity a few months out remains on the positive side of the neutral 50 zone—with the latest reading put at 52.

Not an earthshaking reading, but based on its correlation with GNP, it does seem to point to about a 2-3% annual rate of growth over the next 3-6 months. Factory output should enjoy a similar rate of growth.

Projections for continued—though relatively small—gains are based on more than just the N.A.P.M. barometer-GNP relationship. As noted in our Forecast 1987 roundup there are enough plus factors around to offset the negatives of disappointing capital goods spending and consumer demand. The economy will continue to be marked by relatively low interest rates, trim inventory levels, the absence of supply bottlenecks, low inflation, and a gradually improving trade balance.

That's not to say that poor consumer demand won't have its impact. The drop in auto sales, following the buying surge of last fall, will hurt.

More to the point, the study finds that only 3.4% of American families are thinking about a new car over the next few months.

Nor is consumer caution limited to vehicles. New home buying plans are also off. Ditto, intentions to buy big-ticket appliances.

All this is summarized in the Conference Board's consumer buying index. Note the big drop over the past month—a decline which has brought this key indicator to its lowest point in years (see chart).

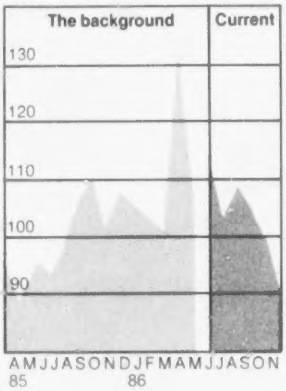
As noted earlier, however, there are plenty of offsetting pluses. And even some areas perceived to be weak aren't faring all that badly. Take construction awards (see chart)—a leading indicator of overall building activity. Housing has leveled off, but this has been offset by gains in the public works sector.

Then, too, housing isn't about to show any major decline—primarily because cheaper money could bring average mortgages (30-year, fixed type) down to near 9% by mid-1987.

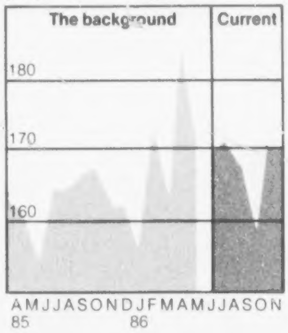
Another heartening sign is the continued strength in help wanted advertising (see chart). It means that business executives are still optimistic and planning new hiring to meet

Leading indicators

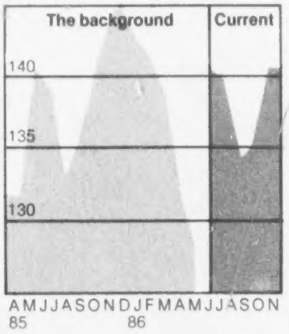
1. Consumer buying plans
(Index: 1985 = 100)



2. Construction awards
(Index: 1977 = 100)



3. Help wanted advertising
(Index: 1967 = 100)



gains they anticipate in the quarters ahead.

The latest employment figures also are mildly optimistic. They show nonfarm payrolls jumping by more than half a million in October and November, with some changes spilling over into the previously hard-hit goods producing area.

Finally, a few words on the trade balance are in order. Though improvement has been painfully slow, there are signs of change—especially in exports where gains in recent months have been reported in such areas as inorganic chemicals, office machinery, telecommunications equipment, electric equipment, and furniture.

Add in an expected drop in imports and the trade deficit could drop by a fair amount.

How this will impact on overall business depends on whom you talk to. But the general feeling is that as much as 1% could be added onto GNP totals this year—as contrasted to the estimated 1% negative trade effect of last year.

Labor will be talking in 1987

It looks like another fairly busy year for labor negotiators.

A new Labor Department compilation suggests that contracts covering 3.1 million workers under major collective bargaining will be up for renegotiation this year. That's about 35% of all workers.

Moreover, about two million of the affected workers will be in the private sector. Industries with the largest number of workers with contracts up for renewal are transportation equipment manufacturing (576,000—including those at Ford and GM in September), construction (377,000), and wholesale and retail trade (251,000).

State and local government bargaining will involve about half of that sector's 2.3 million workers under major agreements. About 813,000 are in local government, and the rest (over 300,000) are involved on the state level.

The 1987 Labor Calendar

	Number of agreements	Workers covered: Actual number (thousands)	Workers covered: % of industry involved
All industries	783	3,103	35.3
All private industries	471	1,988	30.4
Manufacturing	156	941	37.5
Food and kindred products	26	62	38.3
Apparel and other finished products	5	65	21.7
Electrical machinery equipment and supplies	12	51	18.7
Transportation equipment	25	576	66.7
Other manufacturing industries	88	186	20.4
Nonmanufacturing	315	1,048	26.0
Construction	162	377	36.6
Transportation, except railroads and trucking	20	85	33.1
Trucking	2	75	27.5
Utilities, gas and electric	27	81	33.3
Wholesale and retail trade	55	250	37.6
Health services	14	50	34.5
Other nonmanufacturing industries	35	129	9.1
State and local government	312	1,115	49.5
State government	69	302	35.0
Local government	243	813	58.4

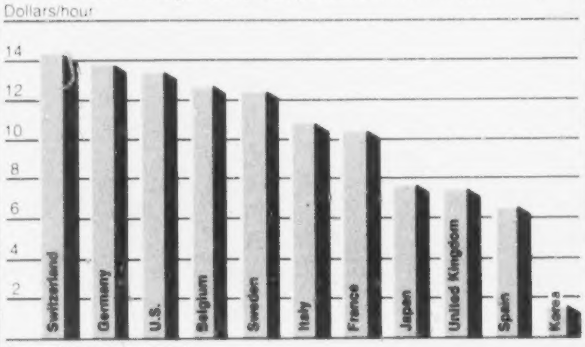
Source: Bureau of Labor Statistics

Also worth noting: 1987 deferred wage changes from contracts negotiated earlier are scheduled for about 4.1 million of the 8.8 million workers under major agreements. The changes will average 3.7%.

About 30% (2.7 million workers) are also covered by cost-of-living adjustment (COLA) clauses. Almost all are in private industry where COLA coverage applies to 40% of the workers. But such clauses are being phased out even in this sector—the comparable coverage figures for the end of 1984 and the end of 1985 were 57% and 49%.

How global wage rates stack up

1986 average hourly compensation, incl. fringes



Source: Business International

U.S. wages fall to European levels

American wage rates—with a major assist from the recent dollar devaluation—are now much more competitive with those of other industrial countries. Indeed, domestic hourly pay (including fringes) is now under that of both Germany and Switzerland.

These new dollar-calibrated pay comparisons, worked up by Business International Corp. (see chart for details), suggest a significant improvement over one year ago when American pay rates were 24% above those of their nearest European competitor.

Analysts at the New York-based consulting firm also point out that a gap of a dollar or less now separates U.S. hourly compensation from that of one-third of the 19 countries surveyed.

That's not to say that there still aren't some big gaps in the Far East. For example, the Japanese labor cost advantage (while down considerably from 1985) is still in the 70% range. This is far too high for comfort.

The point to keep in mind is that these differentials—whether large or small—are clearly shrinking. And this is one reason why most economists these days are cautiously optimistic about narrowing our still-enormous trade gap.

Another positive sign aside from the weaker dollar: The U.S. is now making a better showing—even when viewed in terms of local currencies. Thus this past year's estimated 2.5% domestic pay-plus-fringe advance compares to the considerably higher figures noted for Japan (3%), Germany (4%), France (4.5%), and the United Kingdom (6%).

CURRENT PRICES

Price seesaw stuck in neutral

Moderation is still the order of the day. Industrial producer tags crept up only 0.2% in the past month—less than 2.5% at annual rate. And even more significant is the fact that overall quotes remain more than 4% under year-ago levels.

Much of the latter drop is due to oil which, in turn, has sent *PurchasingWorld*'s energy index down a hefty 31% under a year ago. And the easiness is continuing here. Another 0.4% decline was reported in the past 30 days—as softness in liquid petroleum gas, natural gas, and jet fuel offset small gains in gasoline, heating oil, and diesel fuel.

Also on a positive note for stable prices: While many lines are now edging up, there are still a fair number of offsetting declines. The accompanying table suggests that about one-third of the items regularly monitored by *PurchasingWorld* fell last month.

Chemicals—where declines were noted in inorganics, organics, and fertilizers—are a case in point. But there should be some bottoming out here as new first quarter boosts, many of which could stick, hit the market. Upward pressures have also been developing in plastics.

Capital equipment tags have also been heading higher—up 0.3% over the past month, sparked by increases in construction machinery, railroad equipment, and transformers. But these boosts should slow down in the months ahead as demand remains sluggish. It's not surprising that producers themselves are calling for only about a 1-2% increase here in 1987.

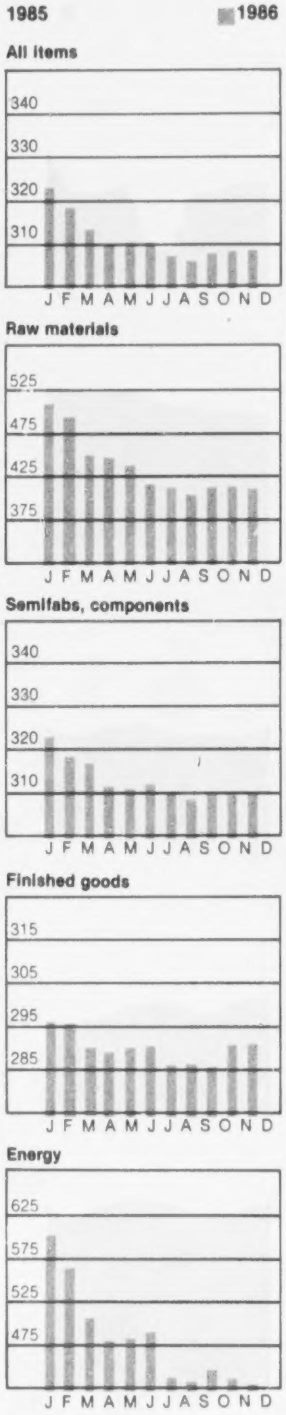
Paper also seems to be on firmer ground—as corrugated makers pass through recent linerboard boosts. Prices of most pa-

This month's breakdown

	Latest level (Dec)	% change from: Month ago	Year ago
Bearings	346.4	−0.1	0.2
Bolts, nuts, etc.	277.5	0.3	0.4
Chemicals, inorganic	294.8	−0.5	−1.5
Chemicals, organic	322.5	−0.4	−8.6
Concrete products	323.8	−0.2	0.1
Corrugated cartons	276.0	0.4	4.5
Cutting tools, small	292.2	0.1	1.3
Electric lamps (bulbs)	346.6	−0.3	−0.3
Electronic components	203.4	0.0	2.9
Fans and blowers	366.5	0.2	1.9
Foundry and forge products	361.6	0.0	−0.5
Fuel oil (residual)	450.8	−0.3	−49.5
Furniture, commercial	320.8	0.0	2.3
Gasoline	311.6	0.2	−45.2
Glass, flat	232.7	0.0	1.7
Glass containers	401.6	0.2	3.8
Gypsum products	352.4	3.1	1.2
Hand tools	385.8	0.1	2.4
Hand tools, power driven	240.2	−0.4	2.3
Industrial furnaces	396.4	0.1	1.2
Integrating and measuring instruments	237.8	0.2	2.1
Internal combustion engines	353.8	0.0	2.0
Lubricating oil	350.6	−1.6	−4.4
Lumber millwork	318.6	−0.3	1.9
Material handling equipment	297.2	0.1	1.1
Metal containers	362.5	0.0	1.2
Metal mill shapes (nonferrous)	299.5	−0.1	−2.2
Metal tanks	299.1	0.4	−2.1
Motors and generators	352.8	0.1	0.5
Motor trucks	330.6	−0.2	5.8
Office and store equipment	155.0	0.2	0.8
Paperboard	281.7	0.3	5.7
Paper boxes and shipping containers	274.7	0.2	3.2
Paper office supplies	241.0	0.6	2.1
Paint	282.4	0.0	1.8
Plastic resins	295.5	1.0	−1.6
Precision measuring tools	269.8	0.0	2.8
Pumps and compressors	[illegible]64.5	0.4	1.3
Refractories	37[illegible].5	0.2	0.1
Rubber belts and belting	334.1	−0.9	−0.7
Scales and balances	232.7	0.0	1.7
Steel products	349.3	−0.2	−3.7
Switchgear	285.8	−0.1	1.6
Textiles, synthetic fibers	148.7	−0.1	−1.1
Textiles, gray fabrics	149.9	−0.2	−1.1
Tires and tubes	230.9	−1.3	−2.1
Transformers and power regulators	237.2	1.5	2.2
Welding equipment	302.0	0.1	2.2
Wire and cable	204.8	−0.3	−0.4

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics

per grades are also rising—with the exception of coated groundwood and consumer tissues.

Metals, however, continue on the shaky side. Both aluminum and copper are having trouble posting increases, and zinc tags have actually declined recently. Ditto, most precious metals. Even steel could have some difficulty in making new 1987 increases stick.

Construction materials aren't all that buoyant either. Little change has been noted from month-ago to year-ago levels. Best bet here: More of the same for the next few months as building activity tops out and overcapacity continues to plague much of the industry.

STEEL SCENE

The bottom is in sight

Early 1987 demand for steel may be ready to bottom out. That's what new industry studies seem to suggest.

Purchasing executives responding to the latest N.A.P.M. steel survey aren't nearly as pessimistic about making near-term purchases as they were just a few months ago.

Right now, for example, one out of every four says he intends to increase receipts of the metal over the next three months. That's not too much less than the 29% who are still contemplating cutbacks. In any case, it's a big swing from just 60 days earlier when "increase" and "decrease" figures were 3% and 42%.

Distributors responding to the latest Steel Service Center Institute (SSCI) survey aren't nearly as optimistic on this point. No further deterioration *vis a vis* the survey results of a month earlier is indicated, however.

Another sign that steel demand may be ready to stabilize—albeit at a very low level: Inventory cutbacks have probably gone as far as they can go. Statistics on this point are impressive. At latest count, buyer holdings were down to less than a 1.9 month supply—a drop of more than 10% from the 2.08 reading of just three months earlier.

That's not to say that steel buyers are not still talking about further reductions. They are. But based on past stock/sales ratios, it's hard to see how users can get along on much less metal.

Steel service center inventories have also been falling lately. Andrew G. Sharkey, SSCI president, recently put them at their lowest levels since 1979.

One problem with all this: When replenishment is needed, some SSCI members fear they may have to pay more for their supplies. Specifically, about 38% see higher replacement costs by mid-

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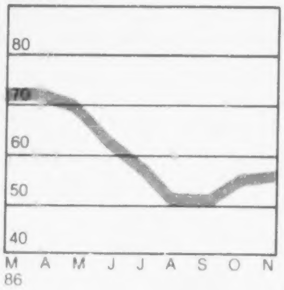
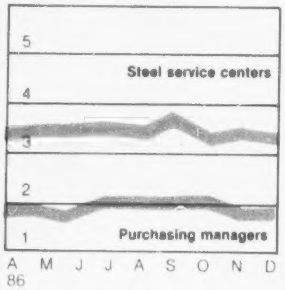
Steel

Operating rates

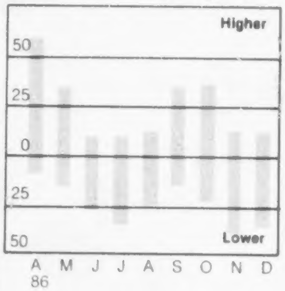


Inventories
(Months supply on hand)

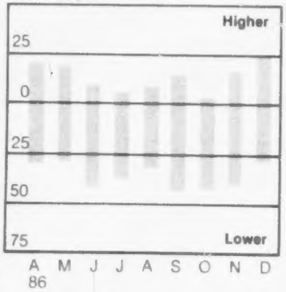


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 11%

SAME 52%

SLIGHTLY BELOW 33%

SUBSTANTIALLY BELOW 4%

Service centers (carbon)

ABOVE 39%

SAME 63%

5-10% BELOW 31%

10-20% BELOW 3%

OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

1987—far more than the 9% who see declines.

A few add that they are also keeping an eye on USX. They feel that when the nation's largest producer comes back on stream, it will offer lower prices in an all-out attempt to regain lost market share.

Import prices, too, could be an additional price rise inhibitor. One out of three service centers says that overseas carbon steel is still being offered below comparable domestic levels.

And in stainless, an overwhelming 83% report lower foreign quotes—with 17% of these distributors putting the differential in the 11-20% range.

The picture is not all that much different on the buyers' front. Some 37% report lower foreign tags—with 4% of these people dubbing the differential as "substantial."

These same buyers, however, admit to some concern over near-term supplies. At least one respondent in eight over the 10 steel categories monitored by the N.A.P.M. says he is concerned about possible tightness over the next few months.

This could be one reason, aside from price, why these purchasing managers are not planning to slow down their dependence on foreign steel. All in all, some 13% of the respondents who buy foreign say they plan to increase their reliance on overseas metal—exactly balancing out another 13% who plan on lessened dependence. More important, this is the first time in over a year that the "lessening dependence" group hasn't predominated.

PROCUREMENT STATUS

And the buying is easy

Not even traditional seasonal factors have been able to push leadtimes onto higher ground. After all, this is the time of the year when industrial ordering reaches its high point.

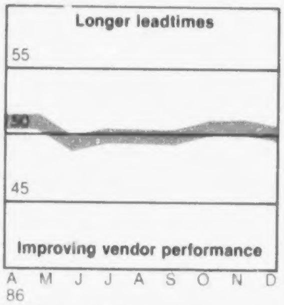
This past month, for example, the few stetchouts noted were neatly balanced by an equally small number of shrinkages—thus keeping *Purchasing-World*'s exclusive leadtime index squarely on the neutral 50 mark. That has been the case—give or take a percentage point or two—for several years. This has been unmatched in other post-war business upturns.

The N.A.P.M. speed-of-delivery index is also encouraging. Just 6% report slower deliveries, and only 3% note speedups.

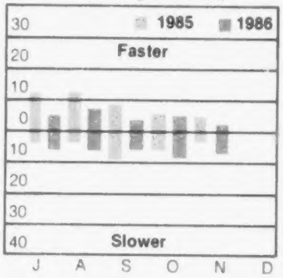
Monthly procurement status report

Leadtime index

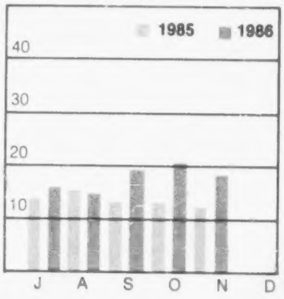
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



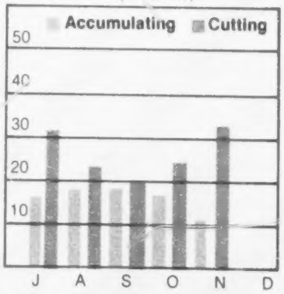
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

The rest (91%) report no changes in this important area.

Further confirmation of the easy buying situation comes from another N.A.P.M. survey question on forward commitments. Only 18% now say they are committing 90 days or more in advance for production materials—down from the 21% figure of the previous month. Conversely, the number of respondents committing 30 days or less increased from 38% to 41% in the past month.

Equally impressive is the fact that industrial purchasing managers continue to cut inventories. The 34% reducing stocks over the past month outweigh the 11% adding. While some of this is undoubtedly seasonal, it's hard to shrug off the fact that this 34% reduction figure is the biggest in three years.

Finally, if further assurance is needed, one only has to look at the demand-supply projections given in the Forecast 1987 section of this issue. These analyses suggest that operating rates will remain at or under preferred levels for virtually every single major U.S. industry.

That's not to say that there aren't worries. Titanium dioxide is the only item on the N.A.P.M. short supply list, but there are concerns about steel. They are probably due to temporary problems stemming from the USX strike.

Leadtimes and availability

Chicago: Capacitors have moved out 1-2 weeks (to 12-20). No other changes in electronic components. Ditto for chemicals—except a drop in surfactants (to 2-4). Aluminum and steel remain at late 1986 levels.

Cleveland: Not too many problems as business remains sluggish. Some key leads (in weeks): Glassines and greaseproof papers (4-5), hardwood lumber (2-3), softwood lumber (1-3), plastic shrink film (on demand), multiwall paper (4-5), and corrugated cartons.

Los Angeles: Grey iron casting delays have doubled (to 8-10 weeks). Some inching up in stainless coil (to 16-18), but other metals are holding steady: galvanized steel (12-14), aluminum tube (5-7), brass castings (8-10), and specialty wire (4-6).

Houston: Plastic resins continue to be available in about 4-5 weeks—with even shorter leads noted for steel fasteners (2) and corrugated boxes (3-4). But galvanized steel coils take a lot longer (16).

Philadelphia: Electronic leads are holding despite some demand pickup. In fact one item, PC boards, has actually dropped—from 12 down to 8 weeks. Some other weekly leads in this sector: Standard keyboards (10), connectors (8-12), fuses (6-8), resistors (4-6), capacitors (6-8), and transistors (6).

Pittsburgh: Things remain pretty much the same—except for manganese where leads are out a bit (to 4 weeks). Other typical leads: plastic bags (3-4), corrugated and folding boxes (3-4), wirebound boxes (4-5), drums (1), waterproof papers (8), plastic packaging material (2-3), PVC (6), and packaging seals (1-2).

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BUSINESS DATATRAK

Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	10	10	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	4½	4½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4½	4½	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	6½	6½	7½
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	9	7	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	14½	14½
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	9	11
Motors (Phil)	9	9	10
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

	Now	Month ago	Six months ago
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	1½
Plywood (Chgo)	3	3	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	1½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	3½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	13
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	11	11	12
Brass Castings (LA)	9	9	7
Brass Rods (Chgo)	9	9	7½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	7	4	8
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6

	Now	Month ago	Six months ago
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	3	3	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	9	9	7
Fasteners, Std. (Phil)	3	3	2½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	13
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

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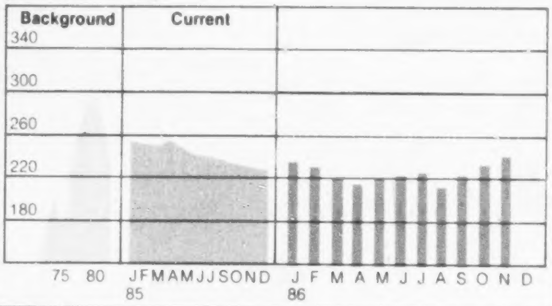
BUSINESS DATATRAK

Raw material price barometer

(Index: 1967 = 100)

Latest month	**243.7**
Month before	**235.5**
Year ago	**234.5**



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	29.25
Steel, plates, Pitts., cwt	18.25	18.25	23.25
Steel, plates, H.R., Pitts., cwt	18.25	18.25	23.25
Steel, sheets, C.R., Detroit, cwt	25.90	25.90	27.85
Steel, strip, C.R., Chi., cwt	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.520	.525	.468
Antimony, N.Y., dealer, lb	1.16	1.18	1.30
Beryllium-copper, cost ingot, lb	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb	1.27	1.27	1.31
Brass, yellow, [sheet], lb	1.22	1.22	1.13
Cadmium, N.Y., dealer, lb	.98	1.07	0.74
Copper, electrolytic, wire bars, refd., lb	.63	.63	.68
Copper sheet, over 24 in., lb	1.36	1.36	1.40
Lead, common, N.Y., lb.	.275	.268	.188
Magnesium, pig ingot, [99.8%], lb	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl	220.00	192.00	297.00
Molybdenum, oxide, dealer, lb.	3.03	3.15	2.60
Nickel, cathode, dealer, lb.	1.78	1.74	1.88
Platinum, dealer, oz	477.00	537.00	346.00
Silver, N.Y., oz	5.73	5.73	6.05
Tin, N.Y., dealer, lb.	3.06	2.86	4.49
Zinc, Prime West, East St. Louis, lb	.440	.465	.330
Zinc, die casting alloy, No. 3, lb	.525	.525	.415
PAPER			
Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.32	16.24	16.19
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	580.00	580.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	320.00	320.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.227	.214	.215
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.060	1.045	1.040
Cotton middling, 1", N.Y., lb	.500	.433	.560
Printcloth, 48", 80x80, N.Y., spot, yd.	.90	1.05	.72
Army duck, 37", 13 oz., yd	1.40	1.40	1.56
Blended printcloth, 64", 78x54, yd.	.80	.80	.80
20s combed yarns	1.74	1.74	1.95
Wool 64s, Staple, lb.	1.90	1.90	2.00

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.455
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal	.98	.85	1.20
Caustic soda, 76% solid, drums, carlots, cwt	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.295	.280	.310
Polypropylene, homopolymer grade (market price), lb	.325	.325	.350
Polystyrene, general purpose grade (market price), lb.	.36	.35	.35
Polyvinyl chloride, pipe grade (market price), lb.	.285	.275	.250
Soda ash, 58%, light carlots, cwt	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.23	.22	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	152.50	157.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb	.77	.77	.69
Xylene tanks, gal	.765	.800	1.360
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	327.75	328.35	308.70
Lumber 2x2 pine, mbf, cl	316.20	316.60	294.05
Plywood, plyform, ¾", msf, cl	592.35	592.35	578.85
Plywood, ⅝", msf, cl	392.40	392.45	367.75
Cement, bulk, ton, tl	63.28	63.28	64.98
Sand, ton, cl	6.62	6.62	6.41
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.27	48.15	48.12
Crushed stone, 1½", ton, cl	7.83	7.83	7.86
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.84	0.82	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	213.07	215.07	212.99
Brick, common, per thousand, tl	186.51	186.51	184.61
Asphalt paving, AC-20	127.08	127.36	176.14
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.36	7.36	7.14
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	11.50	10.50	21.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	17.00	14.75	28.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.375	.415	.770
Gasoline, 94 oct., reg., Chi., tank car, gal.	.428	.436	.798
Heating oil, No. 2, Chi., bulk, gal	.430	.428	.868
Heating oil, No. 2, N.Y., bulk, gal	.438	.420	.858
Heavy fuel, PS 400, Los Angeles, rack, bbl	26.50	26.50	26.50
Jet kerosene, gal	.433	.433	.760
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.240	.240	.345
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	79.00	78.00	69.00
Steel, No. 1 hvy., dlvd., Chi., ton	72.00	72.00	68.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.550	.545	.565
Copper, No. 2, East, wholesale buy, dlvd., lb.	.465	.465	.495
Brass, red, East, wholesale buy, dlvd., lb.	.510	.505	.525
Brass, yellow, East, wholesale buy, dlvd., lb.	.330	.330	.290
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.315	.315	.285
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.335	.330	.310
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.110
Lead, clean solids, East, wholesale buy, dlvd., lb.	.165	.168	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	24.00	28.00	9.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	24.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.090	.090	.085
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.100	.105	.150

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Forecast Lottery '87

PurchasingWorld: What are your long-term (10-year) real growth and inflation projections?
Behravesh: Over the next ten years real growth in the U.S. will average about 3% and inflation about 5%.

PurchasingWorld: Over the long haul, which industries will be strongest? Weakest?
Behravesh: The service and service supplying industries will show the healthiest growth patterns. This group would include business and communications services, computers, and electronic components. Weaker growth will be in sectors dependent on housing and autos which will merely hold steady over the long haul. Especially weak sectors such as leather and some basic energy industries, will actually see declining production.

PurchasingWorld: Any advice for purchasing professionals in 1987?
Behravesh: Purchasing managers should continue to keep tight control of their inventories. There should be room for inventory building later in 1987 and in 1988. Also, buyers should not worry inordinately about inflation. A slow upward movement in prices is all that we should see. Buyers should find that prices for many imported goods will advance more than comparable domestic prices, signaling a logical shift in some buying patterns.

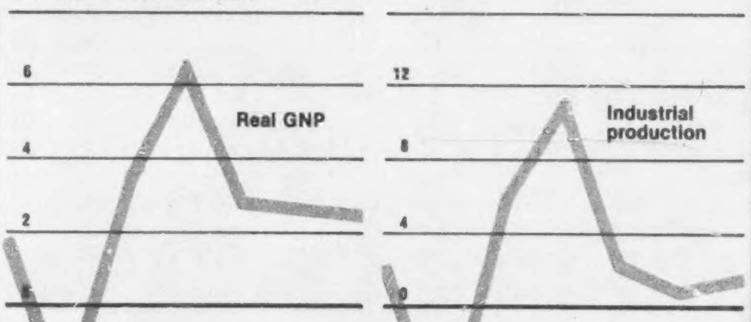
Enough optimism to make economy pop to the top

Can we take another year of so-so growth, just like 1986? We may have to—as *PurchasingWorld*'s chief economic consultant, Dr. Louis J. Paradiso, feels that 1987 could be a carbon copy of the year just ended.

While Paradiso feels that inflation will pick up a bit (primarily because we don't have last year's cushion of falling oil prices), increases, for the most part, will be relatively modest.

Don't be fooled, however, or lulled into complacency. The veteran forecaster sees plenty of problems with still-high federal budget and trade deficits and continuing high unemployment. Some of the basic manufacturing industries will find it hard to get back into the plus column—as purchases by some of the nation's key material consuming industries—notably autos and housing—actually drop a bit under last year's levels.

Growth: two views
(% change from previous year)



Source: Commerce Dept., BLS, PW estimates

The farm segment should continue to present problems for equipment and other sales. Finally, there's capital equipment where overcapacity and the new federal tax bill will combine to put a damper on spending for new plant and equipment.

In spite of all of the above, there are enough plus factors around, says Paradiso, to keep the GNP moving upward. Momentum of the last few years and continued consumer optimism will help. Even more important is the absence of excesses that in the past have precipitated economic downturns.

Inventories, for example, remain quite low. And the rising interest rates of other recovery periods are conspicuous by their absence this time around. Rates have actually been edging lower in recent months.

Then, too, the weakening dollar should have some impact on our negative trade balance—if not now then certainly by the second half of the year. And, finally, there is the absence of inflation—something that invariably leads to a boom and bust cycle.

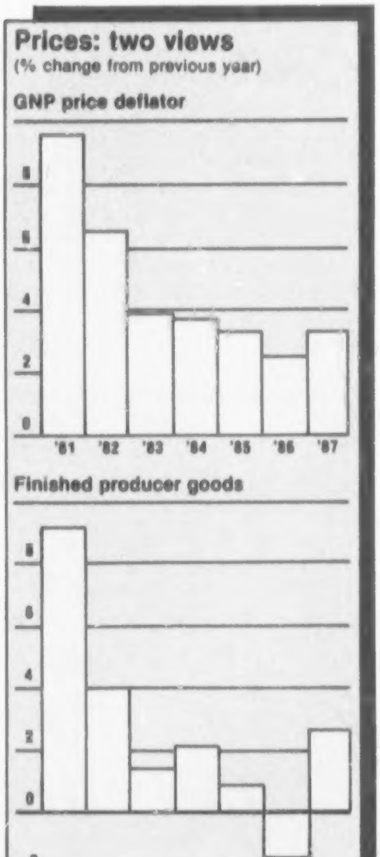
In short, Dr. Paradiso is cautiously optimistic. He feels that next year could be yet another year of economic growth because of our improving international trade position and because 1988 will be an election year—an open invitation, in Paradiso's words, to "prime the pump."

At the same time, Paradiso says buyers will have their work cut out for them. On the price front, for example, overseas bargains will be a bit harder to find. And domestic producers may be more aggressive in pressing for price increases.

Paradiso also suggests a selective view of the day-to-day economic news. "With the picture so mixed, there will be negative and positive statistics. And it will take some careful analysis to discern underlying trends—as it might affect an individual industry or firm."

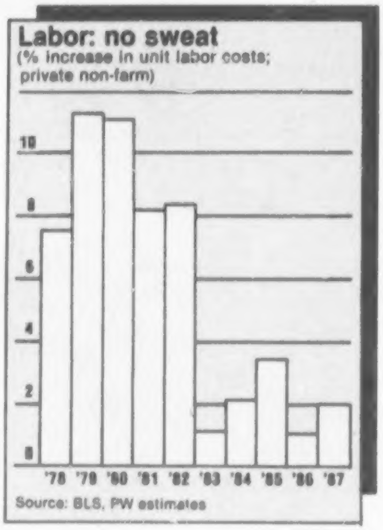
Here's a more detailed sector-by-sector analysis of what Paradiso expects over the next year:

■ **Growth:** Real GNP could vary significantly on a quarter-by-quarter basis—averaging out near 2% for the first half, then slipping during the summer, only to pick up again by fall as our improved merchandise trade situation begins to have some impact.


Prices: two views
(% change from previous year)
GNP price deflator

Finished producer goods

Source: Commerce Dept., BLS, PW estimates


Labor: no sweat
(% increase in unit labor costs; private non-farm)

Source: BLS, PW estimates

■ **Prices:** The lack of inflationary pressures is seen in GNP deflator projections—where increases over each of the next four quarters are expected to hover in the 3-3.5% range. That's slightly above last year's estimated 2.6% advance, a figure that was unduly influenced by the sharp fall in energy tags in 1986.

On a relatively optimistic note, producer finished goods prices will again outperform the GNP deflator advancing by only 2.5% for 1987. There are several reasons for the lower rate of increase: 1) More inflation-prone services are excluded; 2) unit labor cost pressures will remain minimal; 3) excess raw materials will continue to glut world markets; and 4) overcapacity still plagues many finished goods industries, and imports will continue to be a factor in many markets.

Consumer prices should mirror the GNP deflator with an overall advance of nearly 3.5%—up somewhat from 1986's estimated 2% advance.

■ **Labor costs:** The news here is good. In 1986, wage rates moved up only 2.5% in the non-farm business sector. Factor in a 1.5% productivity offset, and the more important unit labor cost figure rose only 1%.

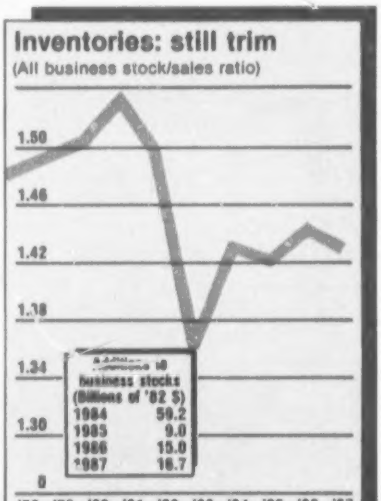
Next year should be almost as good. While wages might accelerate somewhat to 4%, productivity will move up 2% as new automated equipment is added and big companies trim their staffs. Look for unit labor costs to increase only 2%—bringing very little labor cost pressure on prices.

■ **Inventories:** While slowly rising in volume, stocks remain quite low relative to sales. Thus the all-business inventory sales ratio probably averaged out at near 1.37 over the past year—remarkably low given the maturity of the current business upturn and the less-than-expected demand gains in many sectors of the economy.

In any event, the ratio is far under the 1.51 peak hit back in 1982. The recent failure of this yardstick to rise can probably be attributed to a combination of factors: abundant supplies, absence of any hedge buying, computerized inventory controls, and the gradual shift over to the just-in-time inventory concept.

As for the new year, little overall change is expected—with the ratio continuing to move in the low 1.37-1.40 range. This doesn't preclude some modest volume additions, but the volume gain will again be only $15 billion (in 1982 dollars)—roughly the same as reported over the past year.

■ **Profits:** After-tax earnings will barely inch ahead reaching only $140 billion in 1987—up just $2 billion from last year. Margins, trailing traditional levels, will also leave a lot to be desired. On the other


Inventories: still trim
(All business stock/sales ratio)

Additions to business stocks (Billions of '82 $)	
1984	59.2
1985	9.0
1986	15.0
1987	16.7

Source: Commerce Dept., PW estimates

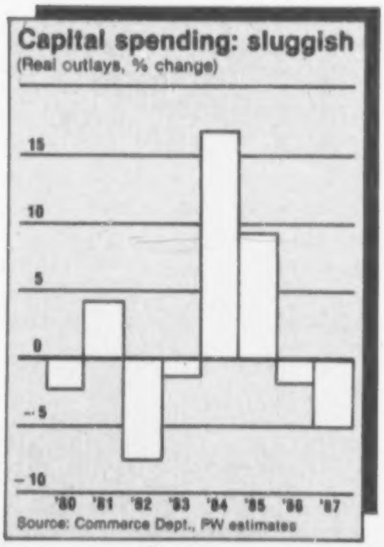
hand, earnings are more realistic than they were a few years back because the illusory inventory profits stemming from inflation at that time have just about disappeared.

▪ **Capital investment and capacity:** Overcapacity and recent tax moves could drop total investment spending as much as 5% under 1986 levels in real terms—all on top of 1986's 2% decline. This could be one of the weakest sectors of the economy over the next 12 months.

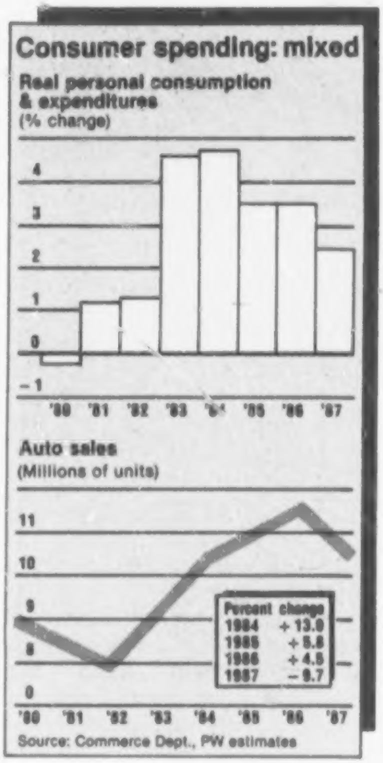
Nevertheless, spending here should be high enough to bring an increase in overall manufacturing potential—but probably only 1-2%.

As for operating rates, superimpose the projected 1-2% increase in industrial production on a capacity increase of the same magnitude—and factory utilization will barely break through the low 80% barrier. This will guarantee a continued buyers' market in most industrial sectors.

▪ **Unemployment:** The jobless rate has been stuck around the relatively high 7% level for several years—even higher for blacks and other minorities. One problem: the lack of enough new jobs. Plant closings and higher productivity have combined to offset gains due to moderately higher economic activity.



Source: Commerce Dept., PW estimates



Source: Commerce Dept., PW estimates

▪ **Interest rates:** The prime rate could edge down another 0.5-1.0% to the 7-7.5% range—on a combination of a relatively easy Fed policy and poor loan demand for inventories and fixed capital expenditures. Mortgage rates under 10% for conventional 30-year fixed-rate loans could also edge lower—to the 9-9.5% range by spring or summer.

▪ **Housing:** Lower mortgage rates have stimulated building activity. New starts, for example, reached the 1.85 million level in 1986, up from the 1.74 million unit reading of the previous year. The higher cost of new homes will take its toll, however, even with slightly lower borrowing costs. Result: Housing starts will do well to top the 1.75 million rate in the quarters just ahead.

▪ **Consumer spending:** Lower tax rates should help appliance and non-durable sales—more than offsetting declines in new auto sales. The latter, incidentally, are expected to drop to 10.5 million units in 1987—considerably under the 11.5 million that cleared the market over the last year when low-cost financing gave the industry a badly needed shot in the arm.

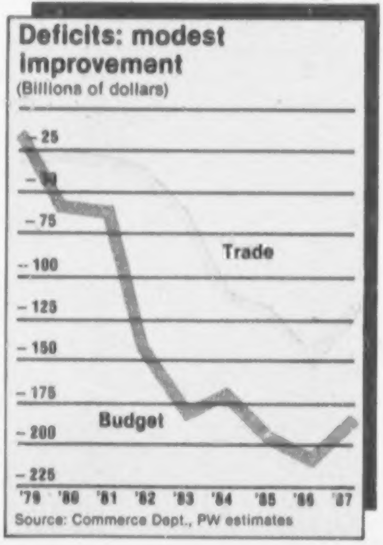
Taken together, spending for personal consumption may continue to advance—as consumers persist in spending more than their traditional share of income on goods and services. Savings as a percentage of spendable income, for example, will remain under 5% as compared to the normal 6% rate.

This, in turn, will permit about a 2.5% increase in real personal consumption expenditures over 1987. True, this is a bit under the 3.5% pace of both 1985 and 1986—and well under the 4.5%-plus rate of the previous two years. But it's a gain nevertheless. Indeed, the projected advance in this largest segment of the spending pie is the key reason why the economy will continue its trend upward in 1987.

▪ **Deficits:** Some improvement in the federal deficit is foreseen as Congress cuts spending. Best bet: a red ink total between $180 billion and $200 billion for the year on a national income account basis. That compares with about $210 billion for the year just ended.

Similar improvement is anticipated in our merchandise trade deficit. Specifically as import prices continue to rise and export tags are kept in bounds (all due to a weaker dollar), the trade shortfall could drop to nearly $120 billion this year,

...continued on pg. 43



Source: Commerce Dept., PW estimates

compared with $150 billion last year. Most of the progress, however, should come in the second half of the year.

But it would be unrealistic to expect any really spectacular improvement as foreign suppliers do all they can to hold onto U.S. market share; i.e. by cutting costs, by absorbing exchange rate losses, and by simply dumping wherever and whenever they can get away with it. Also note that the dollar has not really weakened for many countries in Asia and the Americas. These nations will probably continue to make import inroads into the U.S. market.

Keep this in mind: It could be several years before we are able to reduce the trade deficit to under the $100 billion level. Moreover, any return to the $65 billion levels of 1980-81 seems little more than wishful thinking at this time.

Number crunchers tone down forecasts

Modest growth with minimal inflation is still the order of the day—not only for the next 12 months but for 1988 as well. That's the consensus of the four big econometric forecasting models regularly monitored by ***Purchasing-World***—Chase Econometrics, Data Resources Inc., Wharton Econometrics, and Merrill Lynch.

All of these mathematically-derived projections have toned down 1987 growth estimates. One year ago and six months ago, they were projecting GNP increases of 3.4% and 3.6%, respectively. That forecast has dropped to 2.4%. But it could pave the way for a better 1988. Right now, for example, the betting is that we can achieve a 3% growth rate in 1988—with industrial production growing at a slightly faster 3.7% pace that year (see accompanying chart).

While hardly spectacular, this does represent some modest acceleration. More important, if these projections are correct, 1988 would mark the sixth straight year of economic upturn.

The inflation outlook is also quite encouraging. Despite continued demand gains, the GNP price deflator is expected to advance only 3.0% and 3.9% in 1987 and 1988.

Finished producer quotes (the area of more immediate concern to purchasing executives) could actually fare better—with only a 2.2% advance anticipated for 1987—though some acceleration to near 4% is seen for 1988. While these increases in the finished producer price index mark a change from this past year's estimated 1.4% decline, remember that 1986 was distorted by the sharp drop in energy tags. Take energy out of the figures and the producer prices actually rose a bit in 1986.

What big models predict

Real GNP (% change)	**1987**	**1988**
DRI	2.5	3.3
Chase	2.4	2.7
Wharton	2.9	3.2
Merrill Lynch	1.9	3.1
AVERAGE	**2.4**	**3.1**
Industrial production (% change)		
DRI	2.4	3.8
Chase	2.1	3.6
Wharton	2.7	3.5
Merrill Lynch	2.0	3.8
AVERAGE	**2.3**	**3.7**
GNP price deflator (% change)		
DRI	2.5	3.5
Chase	3.0	3.8
Wharton	3.5	4.4
Merrill Lynch	2.9	4.0
AVERAGE	**3.0**	**3.9**
Finished producer prices (% change)		
DRI	2.3	3.9
Chase	1.5	3.0
Wharton	2.4	4.6
Merrill Lynch	2.6	4.4
AVERAGE	**2.2**	**4.0**
Consumer prices (% change)		
DRI	3.6	4.5
Chase	3.4	4.4
Wharton	3.6	4.9
Merrill Lynch	3.0	4.3
AVERAGE	**3.4**	**4.5**
Prime interest rate (%)		
DRI	7.6	7.1
Chase	7.3	7.9
Wharton	8.1	9.0
Merrill Lynch	6.7	6.5
AVERAGE	**7.4**	**7.6**
Unemployment rate (%)		
DRI	6.8	6.5
Chase	6.9	6.8
Wharton	6.6	6.3
Merrill Lynch	7.1	6.9
AVERAGE	**6.9**	**6.6**

Also on the encouraging side is the fact that interest rates are expected to continue to edge lower. The prime borrowing charge, as seen by the average of the four econometric models, could slip to near 7.5% over the next 12 months. That's more than a full percentage point under the 8.7% level projected just six months ago.

That's not to say that everything will be coming up roses. Unemployment is expected to remain relatively high—at 6.9% and 6.6% in 1987 and 1988 respectively.

Lending confidence to these forecasts is the fact that all four models are fairly close to one another. In the producer pricing sector, for instance, only one percentage point separates the 1987 projections which range from 1.5-2.5%.

There's an even smaller range in consumer prices. In fact, only 0.5% separates high and low forecasts for 1987 and 1988.

And the same is true of industrial production where only 0.7% separates individual 1987 forecasts—a range which narrows to only 0.3% in 1988. The only disagreement seems to be in interest rates where the prime borrowing charge is expected to vary from a low of 6.5% in 1988 (Merrill Lynch) to a high of 9% (Wharton Econometrics).

Forecast Lottery '87

Room at the top for executive bullishness

The news from the nation's executive suites is good—top management is moderately bullish about 1987.

The executives polled in McGraw-Hill's 33rd annual plant and equipment survey see positive sales performance and very little inflation for the current year. But they also expect capital spending to continue to perform poorly.

Here are some of the specific findings of the McGraw-Hill study:

- **Demand:** Corporate bigwigs are betting on a 5.2% increase in real sales volume over the next 12 months. Look at durable goods separately, and the figure is an even more impressive 5.5%.
- **Prices:** Problems should be minimal here. The overall 3.9% increase indicated for all manufacturing represents a big difference from this past year's small decline. But most of the swing is due to zigzagging energy tags—as last year's sharp drop in oil gives way to an estimated 8.9% advance in 1987.
- **Capital investment:** A small 0.4% gain in current dollar terms is projected. But even this is an exaggeration. Higher plant and equipment procurement costs suggest that real (or physical) reinvestment may actually decline.

On the price front, only one durable goods sector—autos—will move up by as much as 4%. More important, the overall price increase for durables is estimated at only 2.2%—not all that much more than noted during the past year.

Similar restraint is indicated in nondurable tags (excluding oil). Textile averages are expected to rise by only 1.2% this year—with chemicals and paper advancing by just 3.1% and 3.2% respectively.

The price outlook for most nonmanufacturing areas is equally encouraging. Indeed, some fractional declines are actually seen in sectors such as rail transportation, gas utilities, and communications.

The price projections for plant and equipment items remain in the tolerably low range, too—with a 3.6% increase anticipated for 1987 as a whole. But this could prove to be on the high side in view of the very small boosts and the less-than-sensational capital equipment outlook described above.

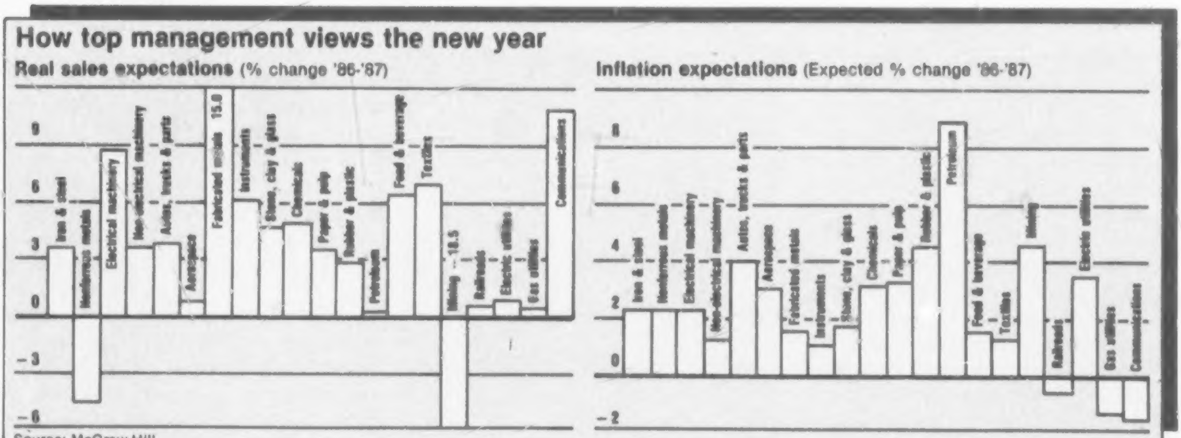
The reasons for the rather gloomy investment outlook aren't too hard to spot. McGraw-Hill analysts pinpoint several factors: 1) the huge trade deficit which reduces U.S. factory activity, 2) relatively low oil prices which have discouraged oil patch spending, 3) a low 79% overall factory operating rate, and 4) reduced investment incentives under the new tax law.

Plant and equipment spending is expected to be especially disappointing in the paper industry where current dollar outlays are likely to drop 24% over the new year. Other negative current dollar investment figures in the manufacturing sector are seen for the automotive, aerospace, rubber and plastics, petroleum, and food industries. Capital spending could also decrease in such nonmanufacturing sectors as mining, railroads, electric utilities, and communications.

Further mention should be made of real sales—since the 5%-plus overall average noted earlier hides some significant industry-by-industry variations. Best showing is expected in fabricated metals where a hefty 15% volume increase is projected. Other big pluses are projected for electrical equipment (9%), instruments (6%), textiles (7%), and communications (11%).

On the other hand, several industries may actually experience declines in activity. Nonferrous producers predict that real sales will be off 4.5%, and mining insiders see a big 18.5% decline.

In short, it looks like another mixed year ahead—with few indications of the solid across-the-board pickup currently being bandied about by overly optimistic Administration spokesmen.


How top management views the new year

Real sales expectations (% change '86-'87)

Inflation expectations (Expected % change '86-'87)

Source: McGraw-Hill

Buyers betting on another good year

What's another expression for "cautious optimism"? Our readers are again hedging their bets and saying that they see only "modest increases" in their own businesses. And they also feel that any increases in the prices they pay for goods and services will be only modestly above the low levels experienced in 1986.

It's also reassuring to note that few expect leadtimes to stretch out—and virtually no one anticipates any shortages. Or as one East Coast buyer explains, "supply-demand conditions suggest that the buyers' market of the past few years will continue. While some problems will undoubtedly crop up, we will make it through 1987 with few, if any, crises."

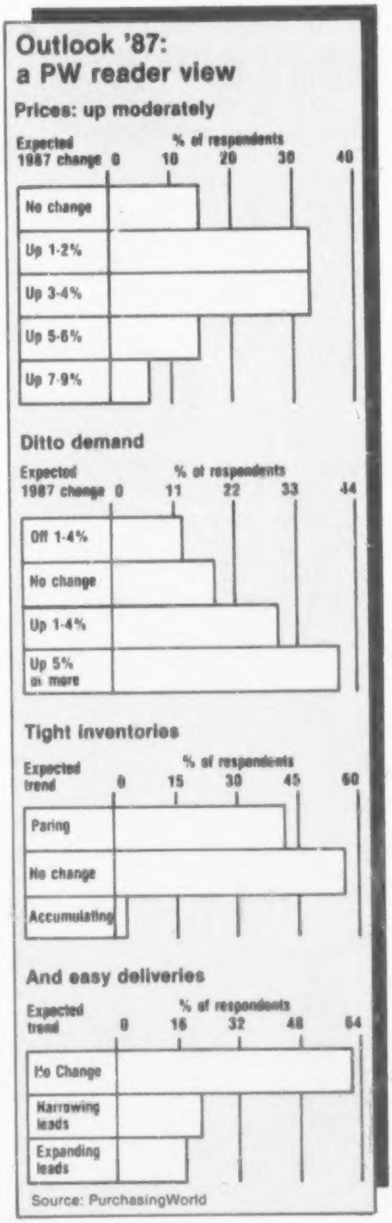
Here's a more specific rundown—based on a new *PurchasingWorld* nationwide survey of industrial purchasing executives:

- **Prices:** The overwhelming majority of survey respondents (85%) expect procurement bills to rise. But most see increases averaging out in the very manageable 1-4% range—with not one single respondent anticipating a double-digit advance. All in all, the average increase is put at 3.4%.

This does represent a bigger advance than last year for three out of every five respondents, but only 3% call it a "major" acceleration.

On a less rosy note, the upward trend will become increasingly apparent as the year wears on. Thus, 53% expect 1987 boosts to be higher in the second half than over the next two quarters. The rest of the respondents are divided: 44% see a flat rate throughout the year, while 3% see second half deceleration.

- **Demand:** An impressive seven out of 10 PMs expect their companies' activity to top that of last year—far outpacing the 12% who see a small (1-4%) decline and the remaining 18% who project no change.
- **Inventories:** Only a miniscule 3% expect to beef up stock levels—despite the forecasted increase in activity. More significant, 41% say that some additional paring may be in order—over and above reductions made over the past 12 months.
- **Delivery performance:** The basically stable situation is highlighted by the fact that little change in leadtimes is expected. The actual survey results: no leadtime change (62%), narrowing leads (21%), expanding leads (only 17%). Only one buyer is worried about availability—and even he limits his concern to certain electronic components.


Outlook '87: a PW reader view

Prices: up moderately

Ditto demand

Tight inventories

And easy deliveries

Source: PurchasingWorld

That's not to say that purchasing executives expect a problem-free 1987. Some of the difficulties and concerns mentioned include 1) stepped-up supplier attempts to boost prices, 2) uncertainty about oil, and hence all energy prices, 3) higher contract service costs due to increased liability requirements, 4) closing down of some supplier plants, and 5) too much reliance on overseas vendors.

But despite all of this, PMs are generally confident that they will be able to keep things under control. Aside from inventory reductions and continued hard-nosed bargaining, other purchasing strategies noted include 1) insistence on top quality, 2) putting more items on long-term contracts, 3) more emphasis on using regional suppliers, 4) increased substitution, 5) a closer look at generic products, and 6) closer buyer-vendor liaisons.

On the latter score, one Chicago-based purchasing executive observes, "We're making a concerted effort to manage the source rather than the transaction." This means, he adds, a closer look at both vendor costs and operating procedures.

One thing buyers disagree on, however, is the optimum number of vendors. Some are looking for more sellers in order to beef up their bargaining clout, while others feel that moving closer to a single source may well be the best answer.

But whatever the tacks being taken, PMs are pretty much agreed on one overall goal: to do better than the general industry price trend. As one purchasing vp sums it up, "We want to come in 1-2% under levels suggested by an outside cost index of the items we buy. We did it last year—and I'm betting we can do it again in 1987."

Passive components

What about the other major sector of the industry—passive components? Some price increases are already apparent because of the weaker dollar and hence lessened overseas competition.

Even standard products such as coaxial connectors may experience upward price movement because, during 1985-1986, prices degraded to the point that manufacturers were unable to make a profit. Thus, even in cases where U.S. component firms are manufacturing their own components, they often have to contend with the rising cost of imported materials, like Japanese film used for film capacitors.

But here, as well as in active components, there will be exceptions to the rule—with a few product lines such as relays anticipating further price declines. Also since military or semicustom did not suffer the same downward pressure as standard products did, their prices will only tend to appreciate slowly in 1987. This is especially true since military market growth will be quite sluggish in 1987.

In any case, here's a detailed supply-demand-price summary for the passive sector (also see accompanying chart):

▪ **Relays:** Reed and solid-state relay prices are dropping slowly—the consequence of meager demand from electronic equipment OEMs. However, manufacturers anticipate stronger sales. Leadtimes are in the 4-8 week range. Solid-state relay prices are still declining in an attempt by producers to gain market share from electromechanical types. Growth in this market will come from the inclusion of the solid-state relay in an I/O module.

▪ **Switches:** Prices have begun to turn around. Pushbutton, rotary, and circuit breaker switches have suffered less price degradation than other types because they tend to be either semicustom designed for commercial users or military components that experience consistent demand. Leadtimes are expected to remain firm. U.S. switch production will exceed U.S. consumption through 1990, partly because of the trend of designing out switches in electronic equipment when possible.

▪ **Connectors:** With the exception of rectangular types, prices will recover following the debilitating price declines connector makers suffered in 1985. Connecter firms look to 1987 for solid improvement in demand. Because many of the offshore connector firms are in countries like Korea and Taiwan whose currencies are tied to the dollar, sharp price increases caused by the yen's appreciation are not expected to occur. In addition, a growing U.S. supplier base has kept prices down.

▪ **Capacitors:** After slumping in 1985, capacitor prices were more stable in 1986. Through 1990, all capacitor types (except monolithic ceramic) will experience average annual price increases of 2-5%. Leadtimes here are still short but will soon begin to stretch a bit. The weakening dollar has caused offshore-sourced material prices to rise, which will be another factor in the near future.

▪ **Resistors:** Prices of several types of resistors are rising as Japanese producers pass on the effects of the yen's appreciation to U.S. OEM consumers. At the same time, manufacturers from other countries whose currencies are tied to the dollar are using this opportunity to garner a share of the U.S. market—keeping the prices of other resistors down. Chip resistors will see especially large price reductions as manufacturers descend the learning curve and realize the cost savings of large-scale production.

▪ **Printed circuits:** Demand for PC boards has firmed after the disastrous drop in billings that occurred during 1985. But double-sized PC boards still experienced price increases in 1986 and leadtimes on this and all other board types will be short—a buyer's market. By mid-1987, as exports of electronic equipment expand and domestic demand strengthens, prices will accelerate. In the long term, however, increasing numbers of board suppliers and modest growth prospects for U.S. OEMs will limit PCB production growth.

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25 commodities won't jump up too much

The lack of upward inflationary push is clear in Data Resources Inc.'s (DRI) latest quarterly price forecast of 25 key industrial product lines.

In the 12-month period ending first quarter 1988, only one item (paint) shown in the table alongside is expected to advance by more than 6%. And even this exception reflects more the catching up that paint, which fell by more than 3% during the year, is doing.

In any event, DRI analysts, in preparing this special report for *PurchasingWorld*, attribute the continued non-inflationary climate to two basic factors: 1) lingering weakness in the energy sector, and 2) very modest increases in labor costs.

On the latter score, the big Lexington, MA-based econometric forecasting firm sees annual increases in private nonfarm production worker earnings rising from a low 2.4% in 1986 to a manageable 3.8% in 1988. The modest acceleration, observes DRI, is due to the gradual tightening of labor markets over the next few years.

Product price trends into early 1989

(comparison of 1st quarter pricing)

Product	Percent change 88/87	Percent change 89/88
Raw materials, energy		
Middle distillates	2.0	6.8
Industrial chemicals	2.5	3.2
Construction materials	1.5	3.7
Supplies for manufacturing	3.7	4.3
Metals		
Steel mill products	3.9	4.4
Steel, H-R carbon strip	5.1	4.8
Primary aluminum	3.3	3.9
Copper cathode, domestic	3.3	5.4
Nonferrous scrap	2.1	4.0
Titanium sponge	2.1	3.2
Copper & brass mill shapes	5.9	6.6
Components		
Tires	2.1	5.4
Paper & products	2.1	2.9
Foundry & forge shop products	4.6	4.7
Electronic Components	4.1	6.7
Construction products		
Plastic construction products	−0.4	1.6
Paint materials	7.8	5.3
Concrete rebars	2.7	4.9
Plumbing fixtures, brass fittings	4.4	4.9
Concrete products	2.0	4.2
Machinery		
Metalworking equipment	4.1	4.7
Electrical machinery	4.5	5.3
Integrating & measuring instruments	2.1	3.9
Oil & gas field equipment	3.3	5.5
Trucks (over 10,000 lb)	5.1	5.0

Source: Data Resources, Inc
Cost Forecasting Services

As for energy, the new forecast calls for crude oil prices under $15/barrel early this year—rising to only $17.78/barrel by the fourth quarter of 1988. And this is the reason why such refined petroleum products as middle distillates are expected to increase by only 2% over the next four quarters. As for gasoline, projections call for only about 1.8% quarterly increases in 1987.

Here's a more detailed rundown of other major product lines:

- **Chemicals:** After an early 1987 advance, prices are expected to level off in response to relatively weak crude oil. And even with some oil increase after that, the average industrial chemical quote is expected to be up only 2.5% over the next four quarters—and just a fractionally larger 3.2% over the subsequent 12-month period ending first quarter, 1989.
- **Steel:** Near-term forecasts (covering the next quarter or so), assume that recently announced increases will be watered down as USX moves back into production after a long strike. For the longer run, the price index for iron and steel products, after falling an average of 3.4% last year, should increase 1.9% in 1987 and 4.6% in 1988. Steel mill products should experience a 2.7% average increase in 1987 and about a 4.6% advance in 1988.
- **Nonferrous metals:** Relatively poor demand is expected to linger into the first half of 1987. But as market activity picks up after that, so will prices. After rising only 2.7% from year-earlier levels in the fourth quarter of 1986, the producer price index for primary nonprecious nonferrous metals will rise 3.7% by the end of 1987 and another 5.1% in 1988. By late 1988, aluminum and copper should be commanding about 59¢/lb and 70¢/lb respectively.
- **Appliances:** Higher costs and higher prices for imported appliances (because of the weaker dollar) will exert some upward pressure. But good demand (because of 1.7 million housing starts anticipated in 1987 and 1988) assures some upward tilt in profits, thereby negating the need for big boosts. Best bet here: an average price increase of only 1.5% annually for the next two years.
- **Machinery and equipment:** Overall tags are expected to rise 2.9% in 1987 and 4.4% in 1988 (vs. only 1.5% in 1986). But bigger advances are projected for machine tools—primarily because of new import quotas and a depreciating dollar. As such, metal-forming tools should rise 3.7% in 1987 and 5.8% in 1988 (vs. only 1.7% this past year).
- **Electronic components:** Modest acceleration is seen as the industry pulls out of its recession. Japanese quotas should also start to have a significant impact on prices by late 1987 and 1988 when computer industry demand picks up. Between 1986 and 1988, increases in the electronic component price index will

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DRI is also making some long-term projections (through the end of the century). By then, for example, the drying up of excess oil supplies should push crude quotes up to over $60/barrel.

Other long-term forecasts: iron and steel (annual increases of 4.2% in 1989, 5.5% in 1995, and 6.2% in the year 2000), nonferrous metals (up an average of 5.8% a year over the 1989-2000 period), and machinery and equipment (average annual increases of 5.6% over the next decade—almost twice the rate between 1986 and 1988).

Prices won't get out of hand—N.A.P.M.

The prestigious N.A.P.M. Business Survey Committee is looking forward to another tolerably good year—confirming what other purchasing executives responding to a new *Purchasing World* survey are saying.

The optimism is sprinkled with a little caution, however. Price increases, while hardly expected to get out of hand, may be a bit more widespread than they were in 1986.

Similarly, while the majority expects business to be better than it was in 1986, a fair number of respondents (59%) says they are a bit concerned about the general business picture. It should be noted that only 2% are pessimistic on this score.

The outlook can perhaps best be summed up by Robert J. Bretz, chairman of the committee and Pitney Bowes' director of materials management. As he puts it, "Purchasing managers expect mild inflation, but remain optimistic that the slow but stable expansion experienced in 1986 will continue throughout 1987."

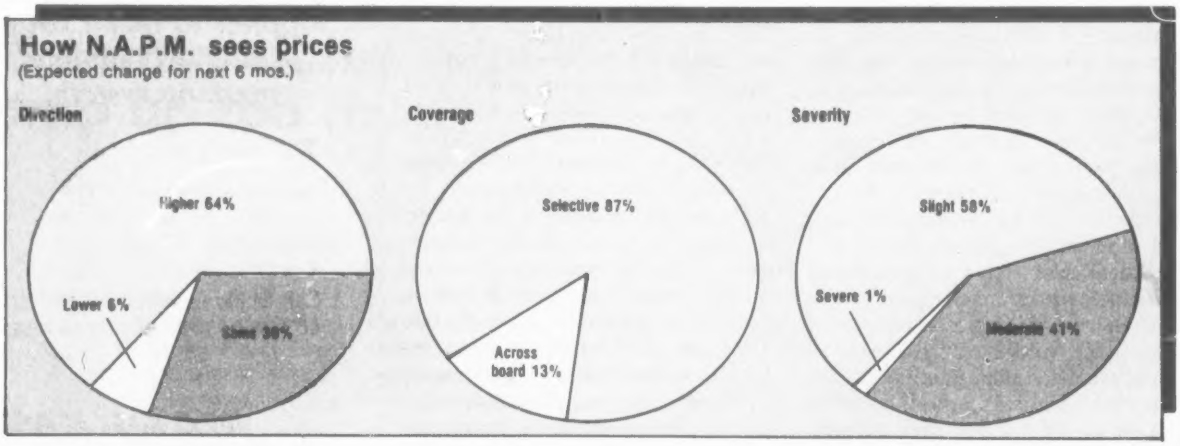
Here's a more detailed rundown of the survey's findings:

- **Prices:** While the number of purchasing managers anticipating boosts over the next six months is up (64% now vs. only 33% and 44% one year and six months ago, respectively), the overwhelming majority of these people feel these increases will be selective (87%) and slight (58%).
- **Growth:** A still impressive 49% expect 1987 to top 1986—with another 36% anticipating no appreciable change. More important, only 15% expect declines. The figures, incidentally, are identical to a year ago when the same question was asked.
- **Supply:** Capacity remains ample, with about 70% of those queried noting that their firms are operating at under 90% of their potential (vs. 64% a year ago). This could explain why capital spending will be heading lower: 29% of the respondents anticipate increases; 40% see declines ahead; and 31% see no change.

Bretz adds that current low operating rates virtually assure continued ready availability and no leadtime stretchouts. The only exception is in military electronics, where he says some tightness has been noted lately.

The N.A.P.M. Business Survey Committee chairman also gives his own estimates for growth and inflation—based on his own experience and comments by members. As for general business activity, he sees real GNP advancing at about a 2-2.5% rate over the new year. And on the price front, he's betting on a 2% increase in overall industrial procurement costs—not bad, but not nearly as good as the relatively flat pattern of the past year. ***PW***

How N.A.P.M. sees prices
(Expected change for next 6 mos.)



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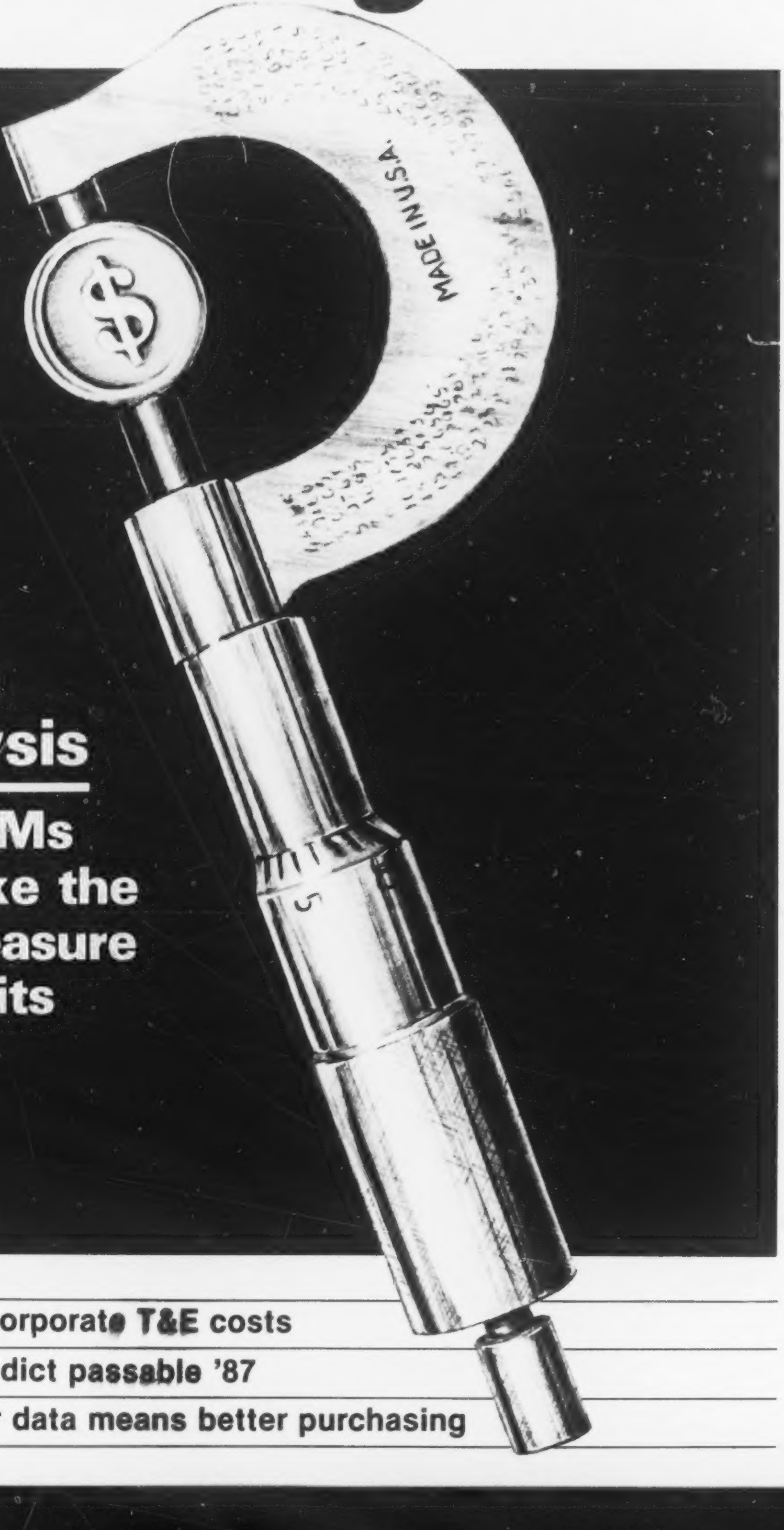

Value Analysis

How PMs can take the full measure of profits

Let PMs slash corporate T&E costs

U.S. pundits predict passable '87

Software: better data means better purchasing

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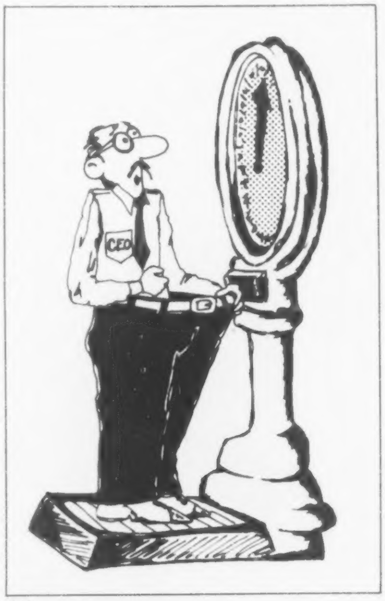
Cover by Donna D'Amico



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PW PREDICTS

Robert S. Reichard, executive editor

Prices to ease upward

The year seems to be getting off to a good start—at least as far as wage cost pressure on prices is concerned.

A new Conference Board study predicts that negotiated raises will average only 2.5% in 1987. This estimate is confirmed by the Bureau of National Affairs. Its latest survey of 181 companies finds that the majority of those firms (77%) want to hold pay hikes in the 2-4% range.

Moreover, nearly one out of three wants to initiate 2-tier wage structures whereby newer employees are paid less than their older counterparts for the same work. Many also want to relax work rules and reduce cost-of-living protection.

But small pay hikes aren't the only encouraging signs on the labor front. Equally significant is the continuing advance in manufacturing productivity. Since the recovery began in 1982, factory efficiency has been increasing. The average gain over this period is estimated at 4% or more per year.

If this trend continues, 1987 could be another year of zero unit labor cost increase in the manufacturing sector—a big plus factor in keeping industrial goods inflation under control.

There are other price determinants suggesting some upward tilt in prices: 1) an expected rise in oil, 2) somewhat better global supply-demand balance in the basic raw material sector, and 3) the weak U.S. dollar.

But at this point none of these latter factors seems strong enough to make much of a difference. Crude oil, while up in price, will almost surely remain well under the peaks of 1985. Few see oil moving above the $18/barrel for the year as a whole.

Raw materials also suggest only a limited threat.—While sectors such as paper, chemicals, and metals have moved toward better market balance, global operating rates in all those areas remain under preferred levels. Implication: continued competitive pricing on these crucial areas.

Last, but not least, there's the much-ballyhooed impact of the softer dollar. While this has tended to push up prices of Japanese and German imports, the dollar has remained quite stable with many of our trading partners. In perspective, the dollar is down a lot less than is commonly supposed—probably only 6-9% on a realistic trade-weighted basis.

It's not surprising that most top economists remain optimistic about holding price boosts to moderate proportions. Lest there be any doubt on this score, take a look at a recent survey of 39 top economists. On average, they see the GNP deflator rising less than 3.5% over the 12-month period ending fourth quarter 1987.

R&D trends

The economy may be a bit sluggish these days. But there'll be little stinting on research and development. Outlays are expected to reach $127.5 billion this year—up 7.4% from last year's estimated levels.

More important, the real gain will be in excess of 4% since R&D inflation is estimated at only around 4%—at least that's how analysts at Battelle, the big Columbus, OH-based research firm, see it.

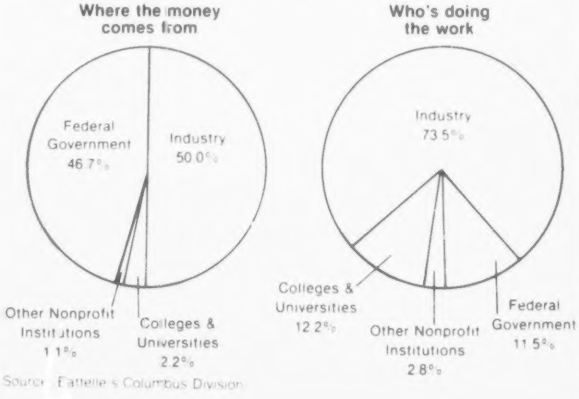
Battelle also finds that the majority of the work (73.5%) will be performed by private industry. On the other hand, industry's share of the money spent on R&D will only be 50%. Most of the other funds will come from Uncle Sam.

Other key findings of the new study:

- Industry support of research is growing in fields related to electronics, communications, sensors, and advanced machinery.
- Industry is also taking over short-term R&D projects and is reacting to the growing pressure from foreign technological competition.
- Increases in defense spending primarily are directed toward long-term acquisition of major weapons systems, including the Strategic Defense Initiative and advanced aircraft—and the R&D needed to support them.
- Energy funds will decline for research on energy supply and conservation, but not for energy programs in direct support of national defense and for general science.
- R&D dollars will continue to support the biological and health sciences—but significant cuts in these areas are anticipated.
- Over the past few years, federal support has tended to shift toward more "development" and less basic and applied "research."

Research & Development

(How this years 127.4 billion outlay shapes up)



Source: Battelle's Columbus Division

PW PREDICTS

Semiconductor demand

The hard-pressed semiconductor industry still has a long way to go before regaining earlier demand peaks. The slow recovery first noted in 1986 will continue, but the accent should be on the word "slow."

New forecasts by In-Stat, a major electronics research firm in Scottsdale, AZ, suggest that aggregate U.S. sales—including integrated circuits and discrete devices—will be up only about 5% over last year (to $8.86 billion). That's not much above the 4% advance of 1986.

As might be expected, the 1987/1984 shortfall will be greatest in the more volatile integrated circuit sector where 1987 sales totals are still expected to run about 25% under their previous peak.

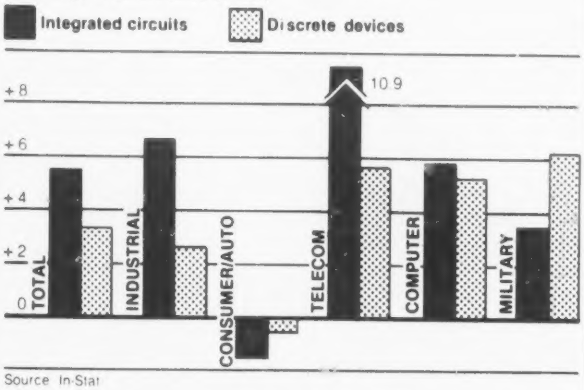
On a more bullish note, all U.S. markets (with the exception of consumer/autos) should use more semiconductors in 1987 than they did in 1986 (see accompanying chart). Biggest advances are projected for telecommunications where integrated circuits and discrete devices are expected to show sales increases of 10.9% and 5.7%.

The computer industry, while chewing up 5-6% more of these items in 1987, will continue to look bad when compared to the halcyon days of 1984. In-Stat doesn't expect this end-use segment to recover fully until 1989.

Another disquieting trend: The U.S. share of the world market continues to shrink as non-U.S. semiconductor sales grow at a much faster rate than domestic sales. Growth projections here for 1987: Europe (9.2%), Japan (8.0%), and the rest of the world, including such key areas as Korea, Taiwan, and Hong Kong (32.6%).

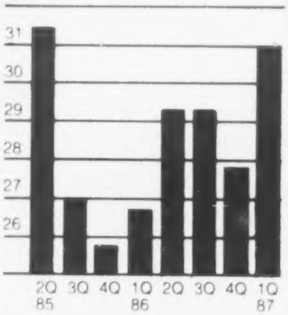
In any case, it's hard to shrug off numbers which show the U.S. share of the semiconductor market pie shrinking to 30.6% in 1987—down more than 1% from last year and down more than 14% from the hefty 44.7% share in as 1984.

1987 Semiconductor end-use markets
(% Change in dollars sales '87 /86)



Source: In-Stat

Polyvinyl chloride prices
Pine grade market price
(¢lb)



Polyvinyl chloride

Prices are firming—quotes are as high as 30¢/lb for pipe grade material. More important, all signs point to continued strength, with market quotes expected to reach the 32¢/lb level by the second quarter. The overall 1987 demand-supply picture also points to strength. Thus shipments this year are expected to advance another 3% (on top of 1986's big 10% jump) to over 7.6 billion lb. Result: Operating rates will move into the relatively high 87% range—significantly above the 70% and 84% readings of 1985 and 1986.

Cellular telephones

Tags have been slipping. The standard mobile unit has dropped to near $1,000—well under the $2,500 price of 2½ years ago. And while tags have temporarily stabilized here due to exchange rate changes and dumping charges, a further decline is possible for later this year. Other cellular phone types cost a bit more—heavier briefcase models with a cluster of batteries is priced at about $2,000. All of these quotes are in addition to monthly access fees, air time charges, and standard toll charges for long-distance calls.

Polyethylene

Recent hikes in LDPE and LLDPE have held up, with market quotes now in the 28-31¢/lb range (that's up 3-5¢/lb from late 3Q 1986). But the recent 4¢/lb HDPE boost has only been partially successful, with prices now in the 30-32¢/lb range. On the other hand, the supply-demand outlook for HDPE suggests further firming over the long run. Reason: Demand in this part of the industry is now expected to rise another 5% this year. That should be enough to push operating rates above the 95% level, as only about a 1.5% increase in new potential comes onstream over the next 12 months.

Aluminum

Prices should stay pretty much near current depressed levels through spring—as demand remains relatively flat. True, cars will contain a few more pounds of the light metal and the container and packaging industry will grow another 2-3%. But this will be offset by the smaller number of cars and trucks turned out—plus some declines in the construction industry. In any event, it's hard to see ingot going much above the mid-50s range. Not much change in other products either—especially can sheet which is being

PW PREDICTS

Copper

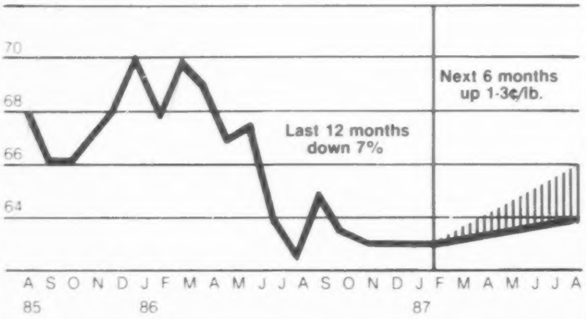
CURRENT SITUATION: Tags remain in the low to mid 60s range—down from the 70¢/lb level of early 1986. Reason: disappointing demand. U.S. chewup of refined metal fell over 2% in 1986—on top of a larger decline in 1985. **Added downward pressure comes from overcapacity and weak global prices.** Comex metal was recently quoted as low as 60¢/lb. A pickup in 1986 U.S. production (total output increased nearly 3%) is also weakening prices.

DEMAND: 1987 doesn't look bullish. A 1% decline in U.S. use (to 2.03 million tons) seems likely as construction and autos take a breather. Global use could move up 1%. Anything beyond that looks doubtful as real GNP advances in other industrial countries parallel those of 1986. The long-term outlook: Substitution will eat into existing markets and no big new use appears likely. **Average U.S. increases through the end of the decade are put at only 1% per year.**

SUPPLY: No problems as Third World countries produce at near capacity to maximize revenue to pay their import bills and interest on debt. If needed, there's plenty of capacity in the U.S. (75% of the world's idled potential is located here). U.S. output has already tended to rise. **Another 7% domestic increase is expected for 1987.** World copper stocks are down to a 6-7 week supply. But they may climb again.

PRICE OUTLOOK: A few cents' advance is possible—but breaking the 70¢/lb barrier this year seems unlikely. If prices rise that high, it may cause a boost in U.S. production which would put downward pressure on tags again. **Even without 70¢/lb + tags,** U.S. producers seem anxious to put more tonnage on the market. Reason: They're more cost competitive thanks to 1) the 20-25% labor cost reduction of 1986 and 2) increasing use of the new SX-EW process.

Producer copper
(cents/lb.)



discounted and price-protected through mid-year. Also holding tags down: new global production. Added output is coming from Becancour (Quebec), Portland (Australia), and Orissa (India).

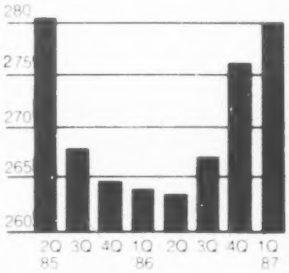
Steel

Discounting still persists. Sheet tags are being reduced from $10-25/ton. And major firming is unlikely. In fact, there could be more softness once USX steel comes back into the market and tries to recoup lost share. Lackluster overall 1987 demand should also contribute to softness—with most forecasts calling for another 1-2% drop in shipments. The only firming sign is the possibility of another 10 million ton reduction in capacity. Even so, U.S. operating rates will remain in the mid-60s range.

Machine tools

Good buys are available on Japanese equipment still stockpiled in U.S. warehouses. But look for some firming around mid-year as recent import curbs (covering Japanese, Taiwanese, German, and Swiss equipment) begin to have some impact. Items most affected by the curbs include NC lathes, small and medium-sized machining centers, punch presses, and certain types of milling machines. But don't expect any major price runup because the industry continues to operate well under capacity—and demand is stagnating, with recent projections calling for a 10% drop in overall domestic shipments this year.

Corrugated carton Prices
(Index 1967 = 100)



Paper

The industry is looking forward to more gains after 1986 advances of 5% in overall demand and a 6% jump in corrugated. Prices continue to firm. Thus 1) the recent $35/ton hike in newsprint (to $570/ton) is holding, 2) producers are attempting another $30/ton boost in linerboard (to $350/ton), and 3) new hikes are reported in market pulp, bleached board, and uncoated white papers. Coated free sheet is firming but discounts persist on coated groundwood as new capacity continues to come on stream.

Zinc

Recent declines from the late 1986 high of near 47¢/lb should continue. Behind the softening: Somewhat weaker demand from the auto sector and recently announced labor settlements. More important: The metal remains in oversupply (existing mine capacity is more than ade-

PW PREDICTS

Energy prices

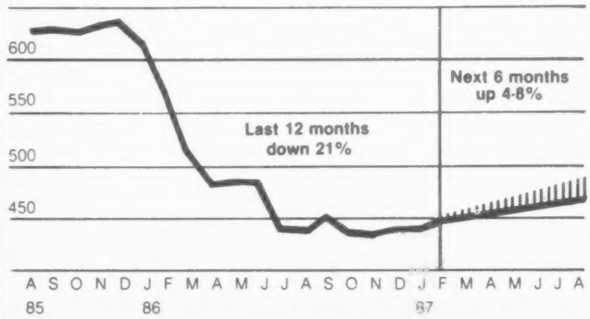
CURRENT SITUATION: The steep 1986 price slide is finally beginning to show signs of bottoming out. The overall energy cost index has moved up 2-3% over the past few months—but that's still about 20% under a year ago. There are signs of more dramatic change—the price of crude oil has jumped significantly over the past few months, reflecting recent OPEC moves. **It suggests that further price boosts are inevitable.**

DEMAND: Recent advances have been quite modest given last year's dramatic decline. Overall 1986 usage rose by only 1%—under the 2.5% increase in real GNP in the same period. Result: Energy consumption (measured in thousands of BTUs per 1982 constant GNP dollar) fell to 20.5—under the 27+ readings of the early 1970s. **This year, usage should parallel GNP—with a total consumption gain of 2.2%.** Look for these other increases: coal (3.0%), electricity (2.4%), natural gas (2.3%), and petroleum (0.3%).

SUPPLY: No problem anywhere—though the oil glut could begin to disappear unless OPEC cartel members start cheating on production quotas. The coal industry has more potential than it knows what to do with. Natural gas continues to be plagued by excesses which should last for at least another year. **Refined petroleum capacity is also adequate**—though recent closings have brought the industry operating rate near the 91% mark—well above the 85% reading of just 18 months ago.

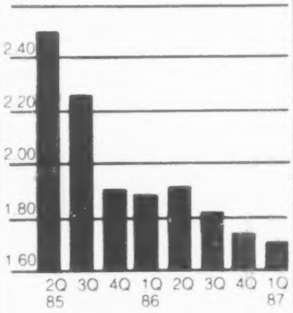
PRICE OUTLOOK: The trend is up with the actual amount of increase depending on the success of OPEC's new strategy. Assuming a crude oil price of about $17/bbl toward yearend, the following advances are suggested: gasoline (19%), #2 wholesale heating oil (25%), #6 resid oil (13%), natural gas utilities (6%), utility coal (1%), and electricity (2%). **Overall energy tags could be up 10-15% in 1987.**

Energy prices
(Index 1967 = 100)



quate to meet demand for another 10 years at 1-2% annual growth rates). In any event, with production returning to near normal levels this year, the Free World could see a surplus of about 30,000 tons in 1987—a dramatic reversal from last year's strike-impaired 160,000 ton deficit. Also aggravating the situation this year: a possible drop in exports to the Socialist bloc.

Nickel prices
(dealer cathode)
(¢/lb)



Nickel

Markets look to remain on the shaky side as the alloying metal faces another year of oversupply. Best bet for 1987: a global excess of 60-80 million pounds in a market of just over 1.2 billion lb. Nor is Inco, the world's largest and lowest cost producer, likely to reduce production. Reason: It would only increase its own unit costs and accommodate higher cost producers and Russia in obtaining a larger market share. As such, dealer cathode is likely to continue fluctuating in the low $1.70/lb range—or maybe even drop a bit below that level from time to time in the months ahead.

Computers

Prices continue to slip—as IBM drops quotes as much as 40% on some PCs. This, in turn, could force clones to drop prices another 50%—into the $500 range—by late spring or summer. The new 32-bit computers (costing three times as much as older models) look firm for the moment. But these, too, should start edging lower as more producers jump into the market. Despite all the easiness, the industry is looking for a 10% increase in dollar sales this year—with totals (including related equipment) reaching $120 billion.

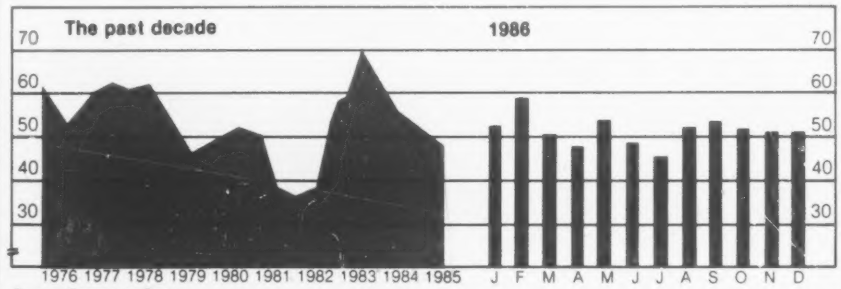
Desktop publishing equipment

New declines could soon push down the low end of the market—some laser printers designed for PC applications are likely to fall under the $2,000 mark. Indeed, there's talk of tags as low as $1,500 by next year at this time. Behind the slide: Over the past year almost 20 firms have entered the field—all fighting for a share of the estimated 300,000 unit-per-year business. But while prices are dropping, users of low-end laser printers face a software problem—the power and speed of 80286 microprocessors can only allow for relatively slow 2-3 pages-per-minute throughput.

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Gains don't come easily

The first quarter is starting where 1986 left off—spotty gains here and there, but not nearly enough underlying strength to ease worries about the still inherently sluggish pace of overall business growth.

The basic trend is best illustrated by the narrow—but positive—51-52 range (50 is neutral) in which the N.A.P.M. Business Barometer has been fluctuating over the past five months.

This could be one reason why the Fed is continuing its relatively easy money policy. Note that the prime rate is down at its lowest level in years (see chart). It could drop another half a percent in the months ahead.

But even with lower interest rates, there's some concern about consumer spending—partly because the big car buying splurge in late 1986 may have borrowed sales from the future. It would be unrealistic to expect any near-term repeat of December when more than 13 million vehicles at annual rate cleared the market (see chart).

It now seems doubtful whether overall 1987 car sales can keep up with last year's 11.4 million total. Most analysts are now predicting sales of only 11 million cars this year.

These figures and others involving purchases of various big-ticket items could prove to be somewhat on the conservative side. Reason: Consumers still have the wherewithall to increase their spending.

Installment debt is high and the savings rate is quite low. But there are compensating factors around. After-tax income should rise another 1.5-2% in real terms this year. More significant, consumer assets have risen sharply because of 1) recent stock and bond market rallies, and 2) a marked rise in home prices.

Factor these income and asset pluses into the spending equation, and consumers can probably afford to increase their overall 1987 outlays by 2.5% in real terms.

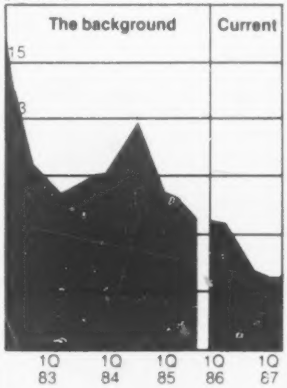
There's also room for some differences of opinion in other indicators which first appear to be negative. While durable factory orders are apparently zigzagging without any apparent direction (see chart), this is mostly due to erratic military ordering. Look at the nonmilitary segment and a slight increase can be discerned over the past few months.

Similarly, all the talk about capital spending turning even weaker can also be questioned. Reason: Most of the softness is in the energy sector. If petroleum can hold onto its recent gains, this negative factor may dissipate.

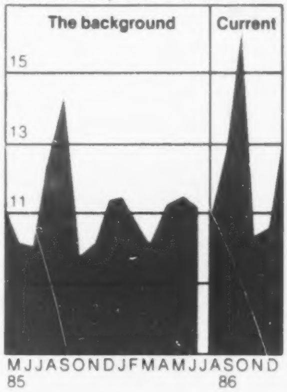
Nor is the trade balance as bleak as it seems. The deficit remains at record levels, but virtually all

Leading indicators

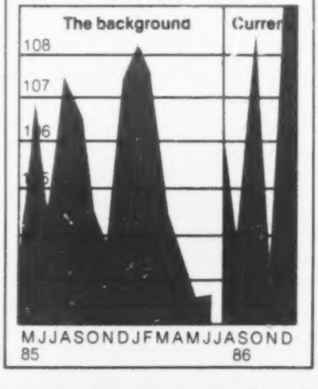
1. Prime interest rate
(percent)



2. Auto sales
(mil., seas. adj. annual rate)



3. Durable goods orders
(bil. of $, seas. adj.)



economists now agree that things will begin to improve—not only because of the weaker dollar, but also because of solid increases in U.S. manufacturing productivity.

Given all of the above, it's not surprising that most top business executives remain optimistic. Some 69% queried by Dun & Bradstreet see the current quarter topping a year ago. Only 6% anticipate a poorer showing.

The recovery is likely to persist for a lot longer than just the next few months. Confirmation of this comes from the latest econometric model forecasts. They show factory output rising 2-2.5% this year—better than last year's small 1% advance.

In short, the odds still favor the economy getting through its fifth straight year in the plus column.

Few problems in your buying future

Count on another month of virtually problem-free procurement.

A combination of factors is behind this trend—including relatively slow demand growth, the absence of crippling work stoppages, and the continued flow of imports to supplement supply holes.

PW's exclusive leadtime index has nudged up a point to 51 and the N.A.P.M. reports a slight increase in slower deliveries (by 8% of surveyed buyers vs. the 4% noting faster service). But these can be regarded as minor blips.

Indeed, some of the recent fears in some areas have actually diminished. Very few PMs seem to be concerned about steel. And earlier talk of a stretchout in some electronic components has all but disappeared as that industry's recovery runs behind expectations.

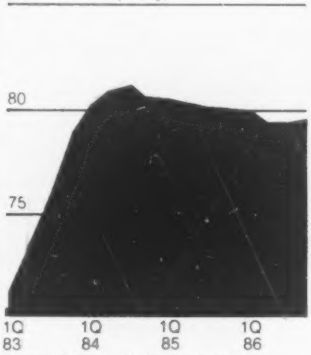
Also confiming today's problem-free situation:

- The fact that not a single item is currently on the N.A.P.M. short supply list.
- The continued inclination on the part of PMs to cut inventories in the face of steady or slightly higher production needs. It's proof positive that buyers are confident that they can get what they need when they need it.
- The fact that only 19% of queried buyers are committing 90 days or more in advance for production materials. Equally impressive: The number of buyers purchasing hand-to-mouth is in the 17% range.

Operating rates also tend to support the feeling that everything is pretty much under control. More to the point: Virtually every single major industry is now operating under its preferred rate.

Factory operating rates stay low

The overall trend
(% of rated capacity)



Source: Bureau of Labor Statistics

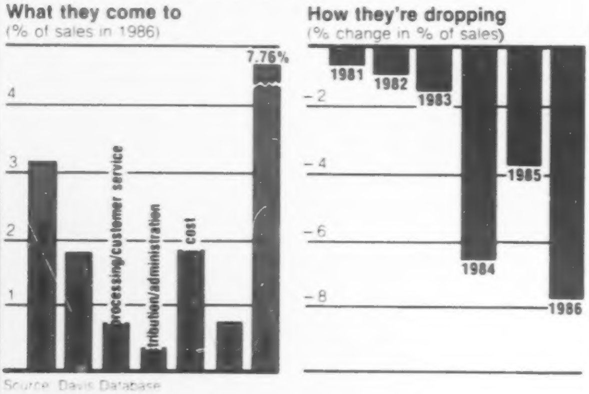
Latest industry details
(% of rated capacity)

Steel	60.3
Nonferrous metals	78.3
Fabric. metal prod	79.5
Nonelec. mchy	70.9
Elec. machy	71.5
Automobiles	74.5
Aerospace	88.3
Instruments	80.3
Textile mill prod	92.6
Paper & prod	96.4
Chemicals	80.8
Petroleum prod	91.0
Rubber & plastic prod	86.9
Mining	73.0
Utilities	79.4

Physical distribution shapes up

A closer look at physical distribution costs may be in order. A new survey suggests that nearly three out of five firms succeeded in cutting these kinds of outlays last year—far outweighing the small number who experienced increases.

Physical distribution cost trends



Source: Davis Database

Another eye-opening finding: The average cost in 1986 (expressed as a percent of sales) fell to only 7.8%—marking the sixth consecutive year of decline from the 10% rate of 1980.

The study—based on a 300-company sample by Davis Database, Englewood Cliffs, NJ—also provides some details on the individual costs that make up the overall physical distribution outlay. The biggest is finished goods transportation (3.14%)—followed by inventory carrying costs (1.86%) and warehousing (1.83%). Other contributing costs: order processing and consumer services (0.71%), and distribution administration (0.37%).

Some interesting three to five year trends are noted in the above figures. Transportation has seen a 21% cumulative cost decrease since 1981, reflecting successful efforts to reduce inventories and improve productivity.

On the other hand, order entry and service expenses, while relatively small, rose 5% over the past year. They also increased 3-10% almost every year since 1981—mainly because firms are handling larger volumes of smaller orders.

The report also finds that there's considerable industry-by-industry variation. High-value drugs show the lowest percent-of-sale distribution cost (3.44%) and industrial non-durables the highest (9.19%).

Also worth noting: The gap between cost cutters and those experiencing cost increases is growing. Thus the 59% who reduced distribution costs an average of 17% last year is in sharp contrast to the 14% who say these costs are rising by an average of 16%.

This suggests that the "winners" had a 33% competitive advantage over the "losers" last year. This 33% differential, superimposed on an average 8% cost, means that the average "winner" ended up with a significant 2-3% greater pre-tax profit than the average "loser."

This month's breakdown

	Latest level (Jan.)	% change from: Month ago	Year ago
Bearings	355.7	−0.2	0.7
Bolts, nuts, etc	277.8	0.1	0.4
Chemicals, inorganic	293.4	−0.5	−2.4
Chemicals, organic	324.8	0.7	−7.9
Concrete products	324.6	0.2	0.2
Corrugated cartons	277.2	0.4	4.8
Cutting tools, small	294.7	0.9	2.2
Electric lamps (bulbs)	346.9	0.1	0.0
Electronic components	203.1	−0.1	2.4
Fans and blowers	366.5	0.0	1.5
Foundry and forge products	363.3	0.5	−0.1
Fuel oil (residual)	479.7	6.4	−49.8
Furniture, commercial	320.9	0.0	2.3
Gasoline	316.2	1.5	−44.6
Glass, flat	233.0	0.1	1.5
Glass containers	402.0	0.1	3.9
Gypsum products	347.4	−1.4	−2.5
Hand tools	388.5	0.7	2.7
Hand tools, power driven	241.0	0.3	2.5
Industrial furnaces	396.4	0.0	1.0
Integrating and measuring instruments	238.2	0.2	2.5
Internal combustion engines	353.8	0.0	1.9
Lubricating oil	346.3	−1.2	−5.9
Lumber millwork	318.1	−0.2	1.8
Material handling equipment	297.7	0.2	0.8
Metal containers	362.5	0.0	0.4
Metal mill shapes (nonferrous)	297.4	−0.7	−2.8
Metal tanks	299.0	0.0	−2.2
Motors and generators	352.6	−0.1	0.4
Motor trucks	324.0	−2.0	3.7
Office and store equipment	155.2	0.1	1.0
Paperboard	278.7	−1.1	4.5
Paper boxes and shipping containers	274.9	0.1	3.3
Paper office supplies	241.2	0.1	2.1
Paint	281.9	−0.2	1.3
Plastic resins	288.5	−2.4	−3.6
Precision measuring tools	269.8	0.0	1.8
Pumps and compressors	363.9	−0.2	2.2
Refractories	370.6	−0.2	−0.2
Rubber belts and belting	337.2	0.9	0.2
Scales and balances	232.9	0.1	1.7
Steel products	348.6	−0.2	−3.8
Switchgear	285.8	0.0	1.4
Textiles, synthetic fibers	148.4	−0.2	−1.6
Textiles, gray fabrics	149.7	−0.1	−1.3
Tires and tubes	230.9	0.0	−1.9
Transformers and power regulators	234.8	−1.0	0.8
Welding equipment	302.0	0.0	1.7
Wire and cable	204.7	0.0	−0.5

CURRENT PRICES

All an inflation fighter could hope for

Final 1986 producer price index figures have turned out to be a lot better than even the most optimistic inflation fighter had hoped for—with a major assist coming from last year's big oil price slide.

Some of the eye-opening declines from December 1985 to December 1986: all industrial items (-4.9%), raw materials except food (-19.6%), and semifabricated and component items (-4.5%).

From now on, it will be increasingly difficult to duplicate the negative numbers of 1986, mostly because energy tabs seem on the way up again. Latest monthly readings show increases in a wide range of energy areas.

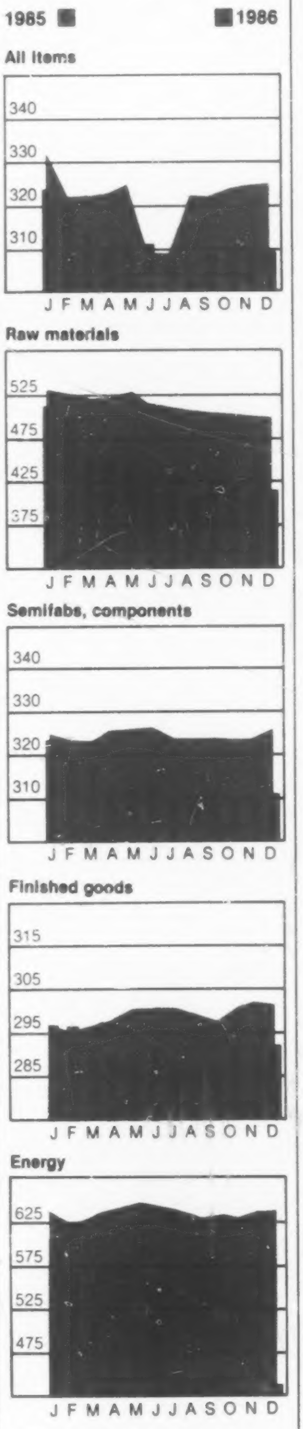
On the other hand, there's little indication of any major shift in other key procurement categories. Construction materials have actually declined (mostly because of seasonal influences), dipping close to 0.5% under month-earlier levels.

A mixed picture is also apparent in the chemical sector. While organics have begun to creep up (reflecting some firming in petrochemical feedstocks), inorganics actually registered a 0.5% decline last month. A larger 2.4% slide was noted in plastic resins. But new 1987 boosts are expected over the next few months.

The absence of any dis-

Industrial prices

(Index 1967 = 100)



Source: Bureau of Labor Statistics

cernible trend is also noted in metals. The "big three"—steel, aluminum, and copper—have all been doing little more than marking time. A similar pattern is anticipated over the next few months.

Things don't look different in more highly fabricated areas, either. On the component parts front, bearings and fasteners both remain relatively unchanged. And in the machinery sector, a few modest increases have been offset by softness in both light motor trucks, transformers, and power regulators.

In short, take away energy, and the early 1987 industrial price trend doesn't look that different from late last year.

STEEL SCENE

Revived buying seen for near term

There could be a revival in steel demand in the next few months—at least that's what purchasing managers and distributors are expecting these days.

Some 35% of steel buyers queried by the N.A.P.M. say they plan to increase their steel purchases over the next 90 days—considerably more than the 24% who currently plan on cutbacks. More significant, this marks the first time since last March that there have been more positive than negative expectations.

And distributors responding to the latest Steel Service Center Institute (SSCI) survey tell much the same story. Only here, the optimism is even more pronounced—43% see increases in their incoming orders vs. only 14% who anticipate further declines.

But one month doesn't make a trend. And most analysts would want to see similar projections for several months before admitting that the steel demand slump is over.

Andrew G. Sharkey, SSCI president, also wants to wait a while before projecting an overall demand gain for 1987. He is still projecting a slight (2-3%) slippage in his group's shipments—with overall 1987 tonnage dropping to the 21.7 million ton range.

Part of Sharkey's caution stems from concern about the auto and appliance markets. And he still does not see any quick turnaround in energy and farm equipment.

The impact of the new tax law also deserves close attention. Sharkey is a bit nervous over razor-thin profit margins, saying that "while the latest survey shows some improvement, our members could be in for a severe test in the months ahead when mill price increases selectively begin to take effect."

Survey results back up this fear—a fair number

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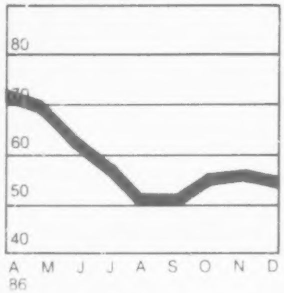
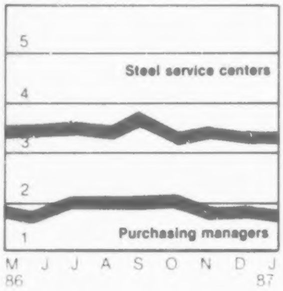
BUSINESS DATATRAK

Steel

Operating rates

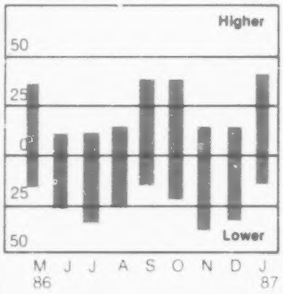


Inventories
(Months supply on hand)

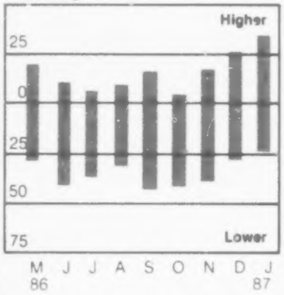


Demand
(Percent of respondents)

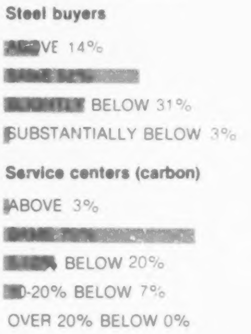
Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

of service centers say they're bracing for higher steel replacement costs. More to the point: Two out of five respondents see increases ahead, although most feel these hikes will be in the 2-5% range.

Also suggesting upward price pressure is the increasing difficulty of locating overseas bargains. Only 27% of SSCI respondents now report import tags on carbon steel products under comparable domestic levels—a far cry from the 80% and above readings of one year ago.

This, too, is confirmed by buyers—34% report that they are able to find "under U.S." quotes vs. 70% a year ago and 45% three months ago.

And the trend is likely to continue—both buyers and service centers report that overseas vendors are now a lot less active in seeking U.S. orders.

Another trend noted in the last few surveys—Inventories throughout the system are very lean. But this has to be regarded as a positive sign because it means that any sizable increase in final demand would quickly be translated into new steel orders. But until that time, both survey groups seem determined to keep inventories lean—or even cut them back a little further. Nearly 25% of queried service centers say their steel inventories are still too high relative to shipments.

Buyers agree—41% say their holdings are too high relative to sales. More significant, nearly half say they'd like to see stocks decrease even more over the next six months.

All this suggests that no one is really worried about availability, partly because of the improving USX supply picture. In any event, there is less concern about shortages over the next six months.

Indeed, the only real concern is in coated sheet—but even here, fewer buyers are worrying now than in previous months.

PROCUREMENT STATUS

Ample supplies are no surprise

Count on another year of adequate supplies and a continuing buyers' market in most industrial procurement areas.

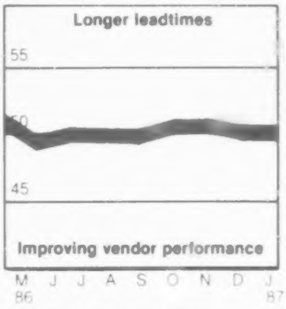
Behind this "no-sweat" situation are the relatively small demand gains currently being forecasted. Increases will be offset by further incremental boosts in new factory capacity.

New production potential is projected to advance 2% over the current year. But production gains over

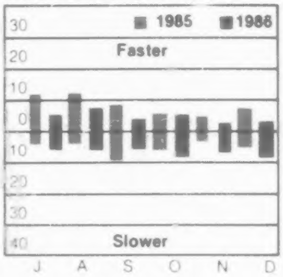
Monthly procurement status report

Leadtime index

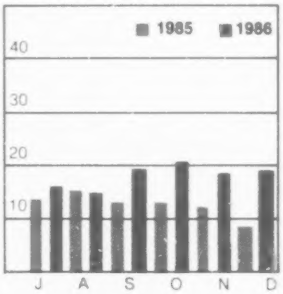
A diffusion index based on 158 key commodities. Above 50 indicates a tendency for leadtimes to stretch out. Below 50 suggests improving vendor performance.



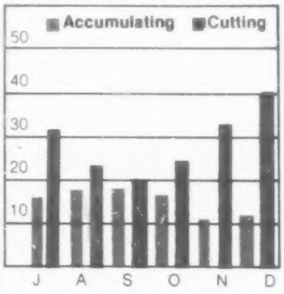
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

the same period (according to a recent *Purchasing-World* survey of econometric models in January 1987) will be rising only 2.3%. So the current 79% overall factory utilization rate is not going to change much.

In any event, it generally takes an 85% rate before problems begin cropping up. That level is still nowhere in sight.

A closer look at industry-by-industry rates is also reassuring (see table). Note that some sectors like steel are mired in the low 60% range. And the current 70% or so readings for both electrical and non-electrical machinery could scarcely be called robust.

A few sectors—paper, textiles, and petroleum products—are sporting 90% or higher rates. But even these readings present no problems.

The paper industry, for example, generally prefers to operate in the upper 90s range. And while textile rates might seem high, the continuing huge influx of imports completely negates any impact that such a reading might otherwise have implied.

Put another way, there's not one single industry that would not want to be operating at a higher-than-current rate these days. This is a good indication that buyers will remain firmly in the driver's seat with little more than selective price increases likely in the near future.

Leadtimes and availability

Chicago: Chlorine leads have been halved (to ½ week). But moving out are aluminum coil and sheet (both now 12-14). No changes in other aluminum items like bars (8), plate (12), and angles and extrusions (6-8). Other metals are also steady.

Cleveland: Hardwood lumber is in a week (to 1-2)—putting it on par with softwood. In paper, natural kraft is now available on demand but other papers remain unchanged.

Los Angeles: Another quiet month—with these weekly leads: Galvanized steel (12-14), aluminum tubing (5-7), grey iron and brass castings (8-10), electromechanical devices (6-8), specialty wire (4-6), pumps (10-12), std. fasteners (4), and stainless coil (16-18).

Houston: Japanese alloy heat exchangers have come in to 8-9 weeks and high-pressure carbon heat exchangers (to 7-9). Also holding steady are corrugated (3½), plastic resins (6½), galvanized steel coils (16), and plastic bottles (16).

Philadelphia: Aluminum foil has moved out to 10-12 weeks and could extend further because of a strike. Possible stretchouts are also seen for yellow and white greases—with a doubling to 2 weeks possible before too long because of seasonal influences and more exporting.

Pittsburgh: Things remain unchanged despite some demand pickup. Typical leads in weeks: Multiwall bags (6), plastic bags (3-4), corrugated and folding boxes (3-4), wirebound boxes (4-5), drums (1), lumber (3-4), laminated papers (6-9), steel strapping (2-3), coil coating paint (4), alloying materials (2), and plastic resins (5-6).

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BUSINESS DATATRAK

Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	10	10	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	4½	4½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	4½	4½	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	6½	6½	7½
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	9	9	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16½	14½
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	9	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

	Now	Month ago	Six months ago
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	1½	2½	1½
Plywood (Chgo)	3	3	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅓	⅓	⅓
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	1½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	13	11	12
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	13	11	12
Brass Castings (LA)	9	9	7
Brass Rods (Chgo)	9	9	7½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	7	7	8
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6

	Now	Month ago	Six months ago
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	7
Zinc (Pgh)	3	3	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	9	9	7
Fasteners, Std. (Phil)	3	3	2½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	9
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

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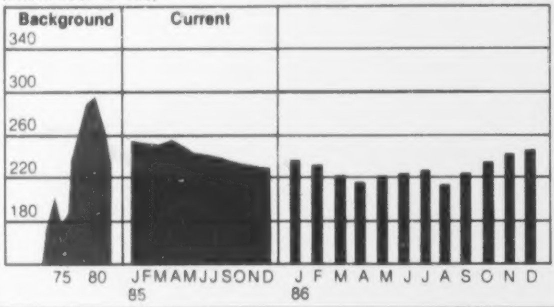
BUSINESS DATATRAK

Raw material price barometer

Latest month	246.9
Month before	243.7
Year ago	235.0

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt	31.00	31.00	31.00
Steel, plates, Pitts., cwt	18.25	18.25	18.25
Steel, plates, H.R., Pitts., cwt	18.25	18.25	18.25
Steel, sheets, C.R., Detroit, cwt	25.90	25.90	25.15
Steel, strip, C.R., Chi., cwt	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.535	.520	.533
Antimony, N.Y., dealer, lb	1.05	1.16	1.28
Beryllium-copper, cost ingot, lb	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb	1.29	1.27	1.32
Brass, yellow, [sheet], lb	1.24	1.22	1.27
Cadmium, N.Y., dealer, lb	0.97	0.98	0.85
Copper, electrolytic, wire bars, refd., lb	.65	.63	.69
Copper sheet, over 24 in., lb.	1.38	1.36	1.41
Lead, common, N.Y., lb	.280	.275	.185
Magnesium, pig ingot, [99.8%], lb	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl	220.00	220.00	269.00
Molybdenum, oxide, dealer, lb	3.10	3.03	2.55
Nickel, cathode, dealer, lb.	1.70	1.78	1.95
Platinum, dealer, oz	534.00	477.00	364.00
Silver, N.Y., oz	5.57	5.36	6.05
Tin, N.Y., dealer, lb	3.13	3.06	4.11
Zinc, Prime West, East St. Louis, lb	.41	.44	.34
Zinc, die casting alloy, No. 3, lb	.525	.525	.415
PAPER			
Uncoated book #3 offset, ton	860.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.38	16.32	16.23
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	550.00	550.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	320.00	320.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.243	.227	.255
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.060	1.060	1.045
Cotton middling, 1", N.Y., lb.	.545	.500	.595
Printcloth, 48", 80x80, N.Y., spot, yd.	.90	.90	.72
Army duck, 37", 13 oz., yd.	1.40	1.40	1.56
Blended printcloth, 64", 78x54, yd.	.80	.80	.80
20s combed yarns	1.74	1.74	1.95
Wool 64s, Staple, lb.	1.90	1.90	1.80

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal	1.15	0.98	1.20
Caustic soda, 76% solid, drums, carlots, cwt	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb	.106	.106	.106
Glycerine, synthetic, tanks, lb	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb	.22	.22	.22
Phthalic anhydride, tanks, lb	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb	.290	.295	.310
Polypropylene, homopolymer grade (market price), lb	.325	.325	.350
Polystyrene, general purpose grade (market price), lb	.36	.36	.34
Polyvinyl chloride, pipe grade (market price), lb	.295	.285	.250
Soda ash, 58%, light carlots, cwt	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb	.25	.23	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt	152.50	152.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb	.77	.77	.73
Xylene tanks, gal	.765	.765	1.360
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	326.75	327.75	306.40
Lumber 2x2 pine, mbf, cl	318.65	316.20	291.95
Plywood, plyform, ¾", msf, cl	584.10	592.35	582.15
Plywood, ⅝", msf, cl	382.60	392.40	380.06
Cement, bulk, ton, tl	63.63	63.28	64.98
Sand, ton, cl	6.62	6.62	6.41
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd	48.27	48.27	48.12
Crushed stone, 1½", ton, cl	7.83	7.83	7.86
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.84	0.84	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	213.87	213.07	208.69
Brick, common, per thousand, tl	186.42	186.51	184.61
Asphalt paving, AC-20	124.19	127.08	176.14
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.36	7.36	7.14
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl	15.00	11.50	20.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.25	17.00	27.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal	.485	.375	.743
Gasoline, 94 oct., reg., Chi., tank car, gal	.500	.428	.708
Heating oil, No. 2, Chi., bulk, gal	.500	.430	.773
Heating oil, No. 2, N.Y., bulk, gal	.483	.438	.768
Heavy fuel, PS 400, Los Angeles, rack, bbl	26.50	26.50	26.50
Jet kerosene, gal	.530	.433	.753
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.240	.430
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	80.00	79.00	74.00
Steel, No. 1 hvy., dlvd., Chi., ton	77.00	72.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb	.560	.550	.580
Copper, No. 2, East, wholesale buy, dlvd., lb	.480	.465	.510
Brass, red, East, wholesale buy, dlvd., lb	.520	.510	.540
Brass, yellow, East, wholesale buy, dlvd., lb	.330	.330	.290
Alum., old sheet/cast, E., wholesale buy, dlvd., lb	.340	.315	.320
Alum., mixed clip., E., wholesale buy, dlvd., lb	.365	.335	.345
Zinc, old, East, wholesale buy, dlvd., lb	.200	.200	.110
Lead, clean solids, East, wholesale buy, dlvd., lb	.170	.165	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	24.00	8.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	20.00	6.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.095	.090	.080
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.110	.100	.140

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

U.S. pundits predict passable '87

Robert Reichard, executive editor

Washington economists remain cautiously optimistic about the prospects for 1987. They are calling for a 2% real advance in overall industrial shipments—actually a bit above the 1.3% compound annual growth rate of the past 15 years.

Another encouraging sign: About 70% of the 219 manufacturing industries surveyed in the new *1987 U.S. Industrial Outlook* are expected to end up in the plus column this year. That's several points above last year's 66% reading and far above the 30-35% low of 1982 (see accompanying chart).

One factor behind this basically bullish outlook is the expected shift in trade patterns. The new forecast for example, indicates that the U.S. trade deficit for the year as a whole could fall by as much as $40 billion.

Unfortunately, not every industry will share in the expected 1987 advance. The 22 fastest growing industries will exhibit a real growth rate of at least 5.4% while the 22 slowest growing industries will decline by at least 4%.

High-tech industries, sparked by semiconductors, will lead the pack. Following close behind with strong growth rates are: electronic capacitors, optical devices, X-ray apparatus, electrical measuring devices, automotive stampings, surgical appliances, adhesives and sealants, particle-board, and missiles and space vehicles.

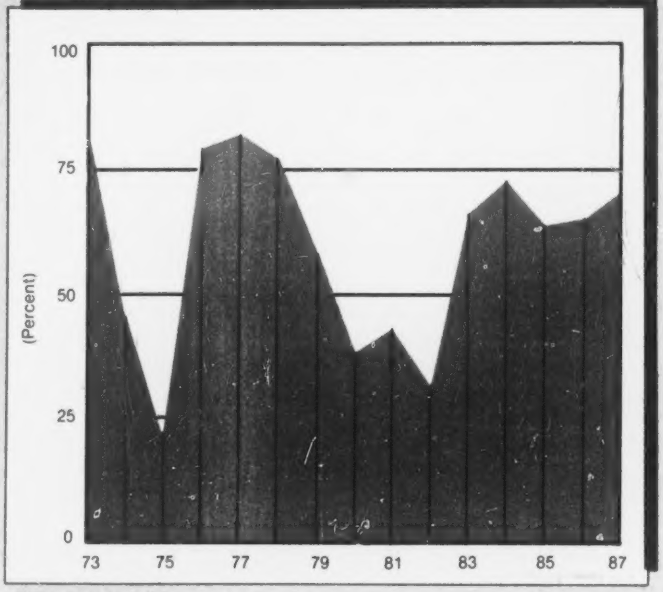
Less ebullient performances are anticipated for most smokestack industries. Machinery and vehicles will be off and metals will be mixed, with only a few products likely to eke out meaningful demand gains. Uncle Sam's experts also expect major differences in price performance. Specifically, 1987 price projections are given for more than 50 individual sectors. But the estimates vary widely—from increases in excess of 10% for petroleum products to actual declines in fertilizers and semiconductors. In any event, very few are close to the 3.7% general price increase now anticipated in 1987 for industry overall.

Here's a more detailed industry-by-industry rundown, based on the assumptions that there will be 1) a 4% increase in real GNP this year, 2) continued restraint in wage increases, and 3) an accommodative monetary policy.

- **Construction:** 1987 gains will be quite modest—perhaps less than 1% in real terms versus last year's 5% advance. Increases in home building and public works will be partially offset by declines in non-residential construction. The declines in commercial construction will intensify but the number of private housing units started should be the same as in 1986. But the value will increase because of a shift in mix toward larger single family homes.
- **Fabricated structural steel:** Declines in office building, utilities, and multifamily housing units will take their toll. All in all, shipments may drop about 8% in 1987—a sharp contrast to last year's 3% gain.
- **Cement:** Shipments should slide about 2% in real terms this year—primarily reflecting a drop-off in nonresidential construction. On the positive side, demand will benefit from the strength of the single-family housing and highway sectors, and improving industrial construction.
- **Gypsum products:** Shipments are expected to fall 3% this year, reflecting sharply lower levels of nonresidential building construction. Sales should drop from the 1986 record level of 20.6 billion square feet to about 20 billion—which would still be the second highest annual sales figure.
- **Lumber:** Look for a 4% gain in industry shipments. A strong housing market, low interest rates, and the gradual decline in the dollar will be the major factors in the anticipated increase. Since the industry continued to cut production capacity in 1986, it has also been able to reduce inventories. Prices are up somewhat, providing better profit margins.
- **Paper:** Based on forecast improvements in the domestic printing and packaging markets, as well as expected gains in exports, shipments by the paper and board sector (adjusted for inflation) could rise 3.2% in 1987. On the price front, lower user inventories and firm demand could open the way for additional cost-recovery price boosts during the next few quarters.
- **Corrugated boxes:** Shipments are projected to climb 3.5% in 1987—slightly below the relatively high 1986 rate of real growth but still

How Uncle Sam sees 1987

Share of industries with increasing shipments (of 219 industries)



Source: Commerce Dept.

Most industries will end up in the plus column

The top 10 performers

	Percent growth
Semiconductor devices	26.5
Electronic capacitors	11.5
Optical devices/lenses	11.0
X-ray apparatus	10.9
Elect-measure devices	10.0
Automotive stampings	9.4
Surgical appliances	8.8
Adhesives and sealants	8.3
Particleboard	8.2
Missles/space vehicles	8.0

But not all will fare equally well

The 10 weakest

	Percent decline
Turbine generator sets	– 62.4
Metal-cutting machines	– 13.2
Bldg paper/board mills	– 10.0
Fabr structural metal	– 8.0
Special dies/tools/jigs	– 7.5
Photoengraving	– 7.3
Vehicles & car bodies	– 7.1
Games & toys	– 6.6
Metal-forming machines	– 6.3
Footwear	– 6.1

above the industry's long-term average annual rate. Exports are expected to continue to rise in volume and value in 1987, but at about half the rate of increase of last year.

- **Petrochemicals:** A small 1.9% shipment increase (in constant dollar terms) is expected this year—driven by increased demand in transportation, construction, packaging, and consumer durables. On the other hand, shipments are not expected to increase as much as consumption because low-priced imports will continue to be a major factor in the U.S. market despite the weaker U.S. dollar.
- **Inorganic chemicals:** Constant-dollar industry shipments are expected to remain flat except for chlor-alkalis where a 4% gain is seen. Imports are expected to decline further because of the softer dollar, while exports will stay flat or increase only slightly.
- **Industrial gases:** Domestic demand for major gases is projected to increase 3% in real terms this year. But demand for nitrogen, which is used to enhance the recovery of oil from oil wells, will continue to be depressed. Exports of gases should increase only slightly because of the weaker dollar.
- **Agricultural chemicals:** Shipments should hold at 1986 levels because of the depressed domestic demand and the lack of any improvement in exports. Imports should rise to meet the demand stimulated by the U.S. grain contract with the Russians. Plant closures, which began in August 1986, are expected to continue because of low ammonia and urea prices.
- **Plastic resins:** Figure on a 2% constant dollar increase in shipments this year—well under last year's big 6% + advance. Prices will depend primarily on the cost of petroleum feedstocks. In addition, competition will be keen as more developing nations start producing plastic resins. Exports will decline and imports will increase. The softer dollar will have little effect on the trade balance because many producers shifted output offshore when the dollar was high.
- **Paints and coatings:** Industry shipments this year are forecast to rise by about 3%. Continued improvement in demand is highly dependent upon developments in the construction and manufacturing industries—which, in turn, depend on the availability of credit. The most promising growth markets over the longer run will be specialty coatings to pretreat polymer composite surfaces for bonding, and special formulations for use in the manufacture of electronic components. Also looking good: coatings for corrosion prevention and industrial maintenance and equipment repair.
- **Adhesives and sealants:** Shipments should jump by more than 8% this year. Demand in certain markets—new aerospace markets and refurbishing of old aircraft—will boost consumption. But demand from other sectors, such as non-housing construction and capital goods, is expected to remain lower than average.
- **Hoses and belting:** Output should rise about 2% this year, reflecting slowly increasing automotive needs. Other markets such as farm equipment and construction machinery may grow 1-2% at best. Imports of foreign machinery and equipment containing foreign hose and belting will remain substantial. Exports may increase slightly because of

1987 Price trends: A Washington view

	Percent price changes 1987/86
Saw mills & planing mills	0.2
Hardwood dimension & flooring	3.2
Structural wood members	3.3
Paper & board	1.9
Glass containers	1.0
Metal cans	1.8
Coal	1.2
Crude oil & natural gas	10.2
Refined petroleum products	13.7
Industrial gases	1.0
Organic chemicals	1.0
Nitrogenous fertilizers	−5.1
Toilet preparations	3.6
Steel mill products	2.0
Iron & steel foundries	3.0
Primary copper	0.8
Primary zinc	0.8
Primary aluminum	3.0
Nonferrous foundries	3.0
Metal-cutting tools	2.5
Foundry equipment	0.3
Industrial furnaces	2.8
Welding apparatus	1.4
Pumps & equipment	2.1
Air & gas compressors	1.8
Mining machinery	0.6
Oil field machinery	0.5
Paper industry machinery	1.3
Transformers	2.8
Radio & TV equipment	4.2
Telephone & telegraph apparatus	3.0
Telecommunications services	2.7
Electronic components & accessories	0.2
Semiconductors & related devices	−11.1
Electronic capacitors	−2.5
Electronic resistors	2.0
Electronic coils & transformers	2.0
Electronic connectors	2.8
Electron tubes	3.5
Xray & electromedical apparatus	1.2
Surgical & medical instruments	1.0
Dental eqpt & supplies	1.9
Truck & bus bodies	2.5
Truck trailers	2.5
Motor vehicle parts & stampings	2.5
Aircraft	4.0
Aircraft engines	3.9
Shipbuilding & repair	2.7
Dairy products	1.2
Cereal foods	3.5
Confectionary products	8.0
Alcoholic beverages	2.0
Travel services	3.2

Source: Commerce Dept.

more favorable monetary exchange rates—and imports may decline slightly.

- **Steel mill products:** Shipments will be off an additional 2.2% in 1987—to 68 million tons. This will mark the sixth year of the industry's slump and, on a shipment basis, will be the industry's worst year since 1983. The anticipated demand softness, in turn, will keep prices weak. Only about a 2% overall increase is currently anticipated.
- **Ferrous castings:** Tonnage is forecast to increase by 4% from the relatively low levels of last year. This basically bullish projection is based on expectations of a substantial increase in general economic activity, improvement in the foreign trade balance, and somewhat larger output in some of the castings end-use industries. Prices should increase by 3%.
- **Lead:** A small 2% consumption gain will push totals to 1.225 million short tons. In any case, sales of original equipment auto batteries are expected to increase, and replacement battery sales could rise, too, if winter is as cold as normal. But further declines in the leaded gasoline market are expected.
- **Aluminum:** Shipments should increase by 2.2% in 1987 to 16.1 billion lb. Improved demand is expected in all end-use markets except transportation. The amount of metal used per car will increase to about 150 lb but this will be offset by a decrease in auto production. Reduced defense spending will also cut into transportation demand. As for prices, primary aluminum is expected to inch up by 3%.
- **Copper:** A 1% decline in domestic use is possible because of much slower growth in new construction and a decrease in motor vehicle production. Not surprising, prices should remain weak—holding in the relatively low 65-70¢/lb range through 1987 as substantial amounts of idled capacity continues to hang over the market.
- **Zinc:** Consumption in 1987 should increase by only 1.5% to 960,000 tons. Galvanizing will be the only end-use sector to improve—sparked by a surge in demand for electrogalvanized steel sheet in the auto sector. The industry's capacity to produce this sheet already rose 2.5 million tons in 1986. Prices should remain relatively stable.
- **Machine tools:** The combination of reduced metalworking manufacturing, continued strong foreign competition, and the effects of tax reform on capital investment will result in declining demand. Constant-dollar shipments of metal-cutting and metal-forming tools are expected to fall 13% and 6%, respectively. Domestic manufacturers will continue to consolidate—stripping product lines and seeking offshore suppliers.
- **Power driven hand tools:** Real shipments will rise by less than 1%—with the only truly bullish sign being a further spurt in sales of cordless tools. An 11% rise in imports is also seen. Half of the imports will come from Japan—with Italy, Sweden, Canada, and West Germany contributing major amounts.
- **Screw machine products:** A fractional 0.4% drop is projected because of weak demand in the auto industry. This drop will more than offset gains anticipated for shipments to the aircraft and machinery sectors. Imports will remain a major concern.
- **Bearings:** Modest increases in construction and farm machinery, mining and oil field equipment, and some industrial equipment markets should make for about a 1% increase in demand. But imports will remain a headache for domestic producers—with another 6% increase in foreign shipments expected to comprise 17% of the U.S. market.
- **Computers:** Demand will vary by type. Mainframe shipments should increase 4% as products with greater processing power at reduced cost hit the market. Medium-scale computers will be up about 9%. Micro systems, however, will be lucky to advance 5%. And even this could be misleading since unit shipments will decrease slightly as U.S. suppliers move to higher value-added systems.
- **Semiconductors:** Real shipments could rise by about 26.5%. But prices will remain soft with about a 11% average decline anticipated. Contributing to the price slippage will be declines in the state-of-the-art 32-bit microprocessor. ***PW***

Survey of the month

Imports still look good to PMs

The U.S. dollar may be a lot weaker than it was just a year ago—but you'd never know it from looking at current import trends.

According to a nationwide *Purchasing World* survey, the number of PMs planning to beef up incoming shipments in 1987 tops those contemplating cutbacks. More important, there still seem to be plenty of bargains around. Prices in many lines are running well under those quoted for comparable domestic products.

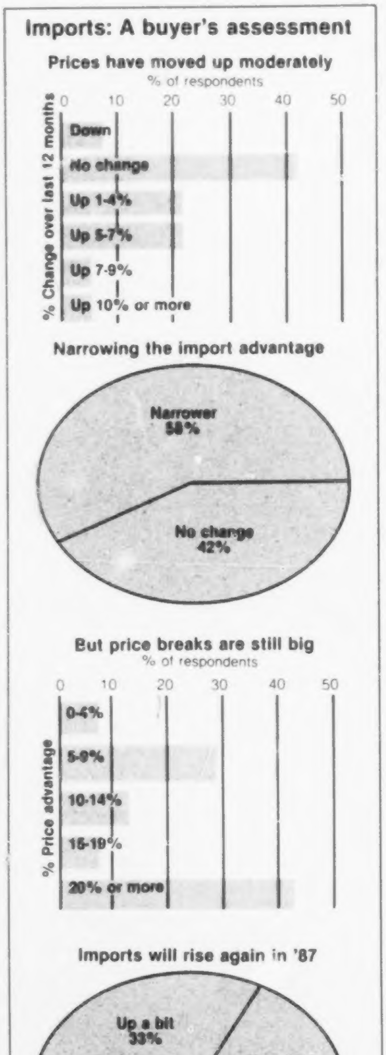
Import tags have moved up moderately, and the price advantage has narrowed a bit, but, for the most part, the savings remain quite large (see accompanying chart).

According to queried purchasing executives, there are several reasons for the continuing import influx. One is that overseas producers have been shaving their profit margins rather than letting exchange rate changes dictate big price boosts.

Another factor cited is that exchange rate changes have tended to be selective rather than across the board. For example, while Japanese quotes have quite clearly moved up (reflecting the appreciation of the yen), many Third World countries have managed to keep their exchange rates steady relative to the dollar. In some cases (Korea is a good example), these countries have actually managed to increase the overall competitive intensity.

Here's a more detailed rundown on how purchasing managers evaluate the import situation for the immediate future:

- **Recent price changes:** Roughly half of those queried say import prices have not risen over the past year—at least as far as overall averages are concerned. Another 20% say the increases have been in the moderate 1-4% range. Conversely, only 30% put increases in the 5% or higher range.
- **Price breaks:** While import boosts, overall, have been enough to narrow the price advantage (according to 58% of those surveyed), savings are still quite substantial. Specifically, half of the respondents put the price break in the 15% or higher range.
- **Best bargains:** The list is quite impressive—including machinery, electronic components, keyboards, fasteners, steel, copper tubing, castings, forgings, packaging, brake drums, dies, plastic moldings, compressors, and machine tools.
- **Potential 1987 import boosts:** Areas mentioned as possible targets for price increases include steel, die castings, plastic resins, bearings, fasteners, nonferrous metals, wheels, and various types of machinery—with the latter being given impetus from recently imposed quota limitations.



Imports: A buyer's assessment

- **Exchange rate role:** Backing up the contention that the weaker dollar has not had any earth-shattering impact is the fact that only 32% of the respondents feel that exchange rate shifts have had a significant effect. But another 40% do say that the softer dollar has played a role in edging import prices up a bit.
- **1987 import volume:** If buyers follow through on their intentions, total incoming shipments should rack up their fifth consecutive yearly rise. Specifically, 58% of the respondents see increases (25% dubbed the projected gains as significant) vs. the 21% who see no change, and another 21% who feel some reductions may be in order.

On the other hand, most U.S. firms say that imports still make up a small percentage of their overall procurement bills—62% put the proportion at 9% or less. Another 21% estimate that the import share is between 10-24%.

The reasons for continuing to import—aside from the obvious price advantages cited above—are not hard to find. A sizable number of purchasing executives cite quality equal to or better than U.S. quality. Other factors behind the continuing inflow: lack of a domestic source, reliable delivery promises, the need for multiple sources, and license agreements.

Import selling efforts could also be playing a role. Thus 37% of responding PMs now say that overseas shippers are more active in soliciting their business than they were a year ago. That compares to 21% who note less activity and 42% who see no change.

One Midwestern buyer sums it all up: "Maybe we aren't getting all of the bargains we did a year ago. But, unless the dollar retreats a lot more (and we don't think it will), there's enough being offered out there to justify another increase in our overall incoming tonnage." ***PW***

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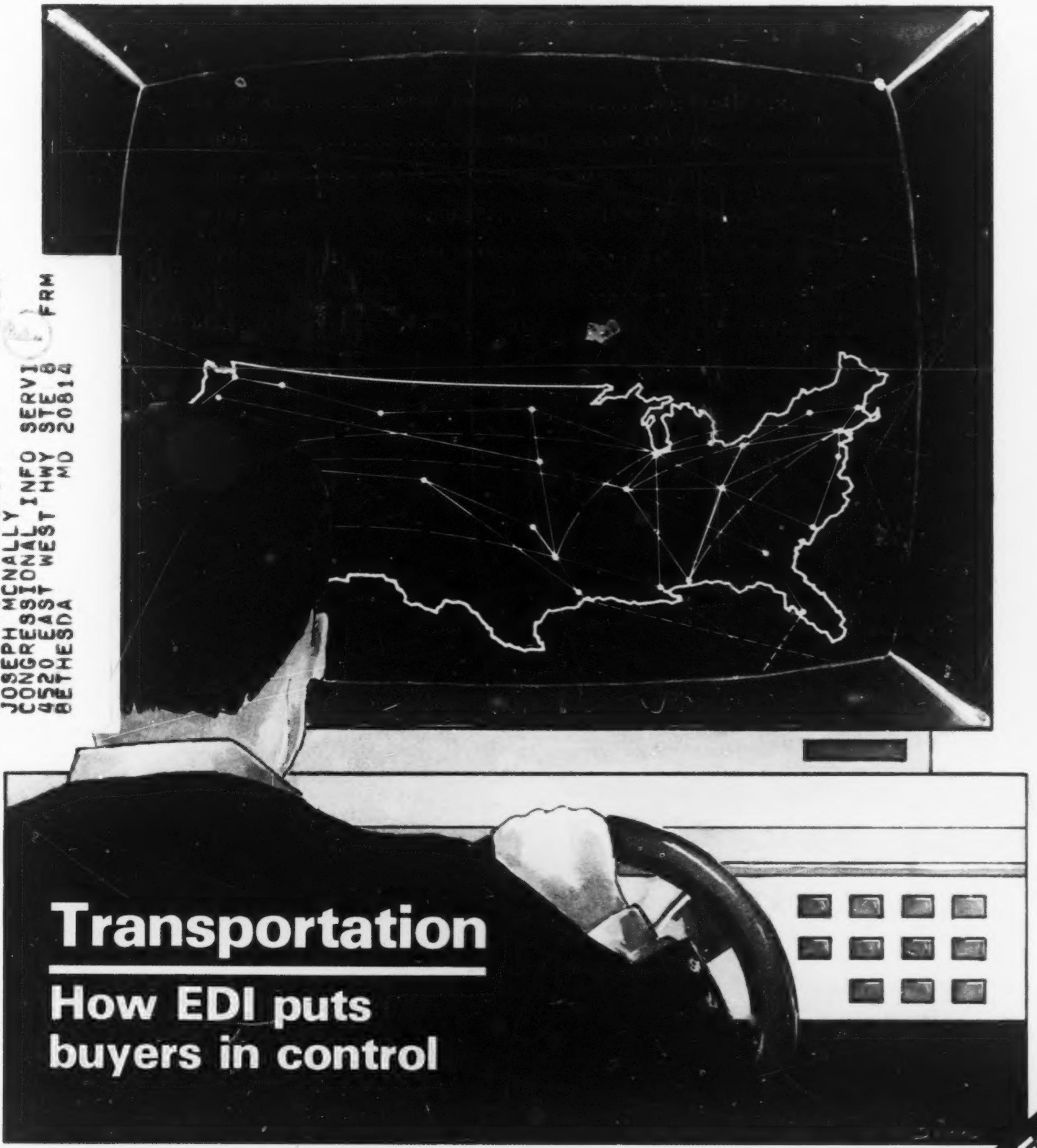

Transportation

How EDI puts buyers in control

How to buy right in oil markets

PM writes Rx for U.S. manufacturing woes

100 best Crystal Ball forecasters!

EXCLUSIVE: Wharton Report

PurchasingWorld®

Helping you manage the business of buying

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PW PREDICTS

Robert S. Reichard, executive editor

Prices follow energy tags—up

Industrial prices are beginning to accelerate a bit. The increases are quite modest in almost all cases, but it's still a lot different from last year when overall averages—sparked by sagging energy tags—actually fell a few points.

The changing climate is reflected in recent N.A.P.M. survey results. At latest report, nearly one in three respondents was reporting higher prices. The respondents characterize the boosts as "moderate or mild." But it still marks a shift from a few months back when only a handful of buyers said they were being socked with higher prices.

Some price realignment is also indicated by *PW*'s spot commodity index which shows raw material quotes moving up by more than 7% in the past three months.

Rising import prices, prodded by the soft dollar, are still another factor. The average incoming quote now runs 8.4% above last year.

And last but not least, energy tags will rise. The bellwether crude petroleum price is expected to average $18/bbl this year—several dollars above last year's level.

But industrial prices are far from taking off. There are still strong anti-inflationary forces—excess capacity, low average operating rates, and very little labor cost pressure.

How much acceleration then? Put all the factors into the computer and the speed-up in industrial producer prices should be quite modest—with increases by the third and fourth quarters coming to only 3% at annual rate.

The same kind of restrained advance is projected for the nation's other big price yardstick: the cost of living index. The higher crude oil prices will boost tags on gasoline and other consumer energy purchases. And this can't be underestimated—the energy sector accounts for a big 11% of total consumer outlays.

Dollar softness, also referred to earlier, will have its impact on the consumer level, too. Thus non-energy consumer goods have been advancing at about 2.5% over the past few quarters—sparked by price boosts in incoming shipments of autos, electronic goods, cameras, watches, and wines. That's considerably faster than the less than 0.5% annual rate of gain noted during the previous six months.

More important, there could be additional increases on the consumer import front. Overseas sources, despite the price hikes noted above, have been absorbing much of the exchange rate shifts. But they have gone as far as they can—any additional dollar weakness is likely to be passed through in the form of higher prices on an almost one to one basis.

Finally, don't forget services. While they have not been accelerating in recent months, they continue to rise at a rather strong 5% rate—again adding to overall cost-of-living upward pressure.

Most analysts are calling for the consumer price index to rise by about 3-4% annually by the second half of 1987—well above the 2% advance in 1986.

Import prices

Import bargains are becoming harder to find these days. As of the beginning of 1987, for example, the average import tag (excluding fuel) was running 8.4% above year-earlier levels, primarily because of the softening dollar. And with further dollar deterioration predicted, more boosts seem almost inevitable in the next few months.

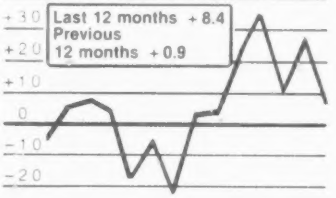
The increases, however, will vary product-by-product. Individual sectors should shape up like this:

- **Fats and oils:** Average quotes rose 45.4% in the past quarter after two years of decreases, due in part to smaller oil crops in Malaysia and the Phillipines.
- **Intermediate manufactured goods:** The largest recent increases have been in paper and paperboard products—up 4.6% because of higher newsprint tags. Metals turned softer—iron and steel and nonferrous metals were off 0.4% and 2.3% respectively.
- **Machinery and transport equipment:** The latest 1.7% average quarterly advance follows several even higher boosts. Result: Totals are up 12% *vis a vis* a year earlier. Biggest increases in the past quarter were in road vehicles (2.6%), and specialized and general industry machinery (1%).
- **Miscellaneous manufactured goods:** Except for electronic components (up 7.5%), quarterly increases were modest—scientific and controlling apparatus (0.7%); photo, optical, and clock equipment (0.7%); electric motors (0.3%); and plastic materials (1.8%).
- **Fuel:** The new OPEC production pact pushed up averages 14.3% over the past quarter. But imported natural gas dropped 16.5% primarily because of continuing Canadian deregulation.

More hikes in import prices

The overall trend (ex fuel)

(% increase over previous quarters)



Source: Bureau of Labor Statistics

Detailed increases

(% increase over past year)

Textiles	5.6
Steel bars, rods, shapes	1.8
Fasteners	7.5
Tools	10.3
Elec. motors and gener.	12.8
Textile mchy.	18.7
Printing mchy.	22.9
Metalworking mchy.	17.9
Heating and cooling eqpt.	16.8
Pumps & compressors	8.9
Mechanical handl. eqpt.	21.4
Bearings	13.1
Office mchy.	14.8
Elec. mchy.	10.7
Autos	14.9

Construction materials

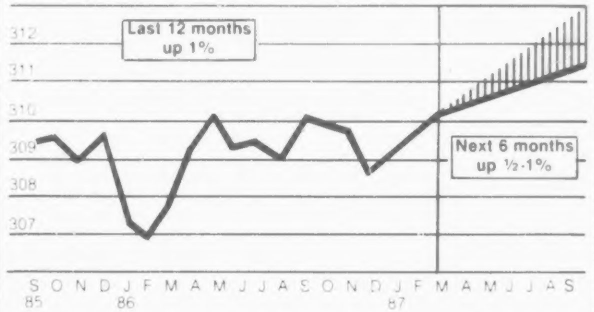
CURRENT SITUATION: Buyers remain in control despite strong construction activity—price averages are up only about 1% over 1986. But that doesn't tell the whole story. Some oil-based products such as asphalt paving are down 30%. Cement is down, too—about 2.5% vs. last year's readings. Plastic construction products and structural steels are also weak. **The only strong item is softwood lumber**—7% above last winter's levels.

DEMAND: Demand is leveling off. Low mortgage rates for single-family housing should offset 4% and 2% gains for lumber and flat glass. **But contract awards for multi-unit residential housing, transportation, and commercial sectors of the market are declining.** Government forecasts project these drop-offs: hydraulic cement (-2.0%), brick and tile (-2.1%), concrete block and brick (-2.8%), ready mixed concrete (-1.1%), gypsum products (-2.8%), and structural metal (-8.0%).

SUPPLIES: There's ample supply—even for lumber. Demand is expected to increase at a time when Canadian imports should be tapering off. **No problems in cement, either.** Capacity utilization is under the 80% level and imports are 18% of the total market. Structural steel will be on the easy side and imports will play a significant role. There's plenty of coal ash.

PRICE OUTLOOK: 1987 looks good for buyers—average quotes will rise only 1%. But there are exceptions. Favorable demand and import restraints on lumber suggest a 4-6% increase. And structural steel shapes could be up. **But cement should remain weak.** Little price boost is seen as the U.S. declines to put duties on imports. Other changes for 1987: asphalt roofing (-2-3%), glass (+2-3%), insulation materials (+1-2%), copper wire and cable (little change), and gypsum board (-0-1%).

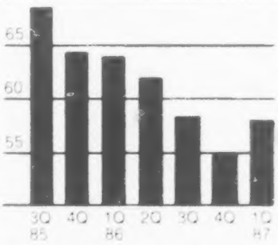
Construction material prices
(Index 1967 = 100)



Steel

The end of the USX strike suggests some near-term easiness—with 3-5% being knocked off average tags over the next few months. The soft price pattern is verified by lower construction and auto demand for steel. Industry shipments are expected to drop to 65 million tons—off several million from last year. Excess capacity should also contribute to easiness—at the beginning of 1987 the industry was capable of turning out 119 million tons of raw steel—far more than suggested by this year's shipment estimate. Look for operating rates of under 70%.

ABS plastics
(Pipe grade market price, ¢/lb.)



ABS plastics

Last year's weakness is giving way to a firmer trend, as molding and extrusion grade resin prices move up 2-3¢/lb. Pipe grade resin is also edging up—the average price is estimated to be in the 55-61¢/lb range (up about 3¢/lb from late 1986 levels). Higher styrene monomer costs have been a key factor behind the new boosts. Other factors: 1) a drop in imports from Taiwan as that nation loses "favored nation" status, and 2) rising demand. The latter could be up as much as 5% this year—actually a bit more than last year's 4% increase.

Aluminum

Some modest firming is noted as transaction prices for many common alloy flat-rolled products sold to original equipment manufacturers are boosted up to 8¢/lb. Ingot remains in the 55¢/lb range. Demand isn't very bullish either. U.S. shipments could rise about 2% (to near 16.1 billion lb). But overall global supply-demand patterns suggest increasing inventories. Specifically, Free World consumption is estimated at only 12.45 million metric tons—somewhat under production which could rise to near 12.8 million metric tons.

Polystyrene

Rising benzene and styrene costs have helped push prices for the general purpose/crystal grade up into the 38-40¢/lb range—up 3¢/lb from late 1986. Strength could continue as demand advances 5-6% (about twice as fast as GNP) due to increases in the auto, appliance, and video/audio cassette markets.

Computers

Slippage is still the order of the day. The new, more powerful "386" PC is ready to hit the market at

Zinc

CURRENT SITUATION: Zinc is now fetching under 40¢/lb—vs. last fall's price of 46¢/lb. And European quotes have dropped $100/ton. Behind the decline: 1) the less ebullient outlook for some key markets, 2) increasing supplies following recent strike settlements, and 3) some LME and U.S. inventory buildup. **The fact that buyers continue to hold off on forward orders in expectation of even lower prices is not helping either.**

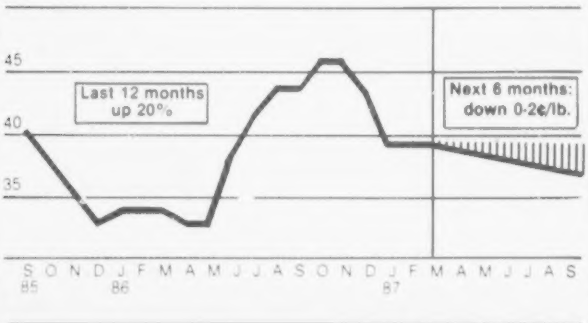
DEMAND: 1987 doesn't look that robust. Total U.S. slab zinc consumption will rise by only 1.5%—to 960,000 tons—vs. the 1.04 million tons clearing the market in 1979. **Best showing will be in the galvanizing area as auto firms intensify their rust-prevention drives.** Long-term overall growth will also be restrained—only 2% a year. Again galvanizing will be in the forefront—**as the market for galvanized sheet grows 20-25% over the next 8-10 years.**

SUPPLY: There's excess global capacity in mining and smelting. And U.S. production will rise 8% this year—to 325,000 tons—close to the 340,000 ton capacity level. Compare this to the 750,000 ton capacity per year of a decade ago. There's still ample supply outside the U.S.—70% of imports will come from Canada and Peru. **In the long term, there should be plenty of galvanized potential around**—just last year, capacity to turn out electrogalvanizing steel sheet jumped 2.5 million tons.

PRICE OUTLOOK: More volatility could be in store for 1987. Over the next few months, the going rate could come down another few cents, but quotes should remain well above the under-35¢/lb levels of last spring. Beyond that, much depends on labor. If new strikes break out (some contracts expire at the end of April), another runup is possible. **But even then gains should be limited—averages are unlikely to regain recent highs as demand remains subdued.**

Zinc prices

(Cents/lb.)



prices almost 40% lower than original models. Bigger computers are also dropping. In recent weeks 1) IBM announced extensive cuts in its Sierra mainframe line, 2) Hewlett Packard slashed 28% off its recently introduced HP 9000 Model 840 technical workstation, and 3) Digital Equipment Corp. has introduced new engineering systems that drop tags to around $10,000—half the price of the firm's current low-priced systems.

Copper

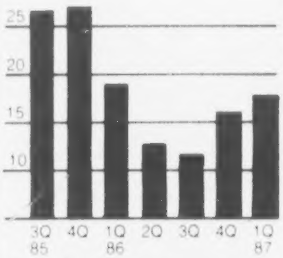
The red metal is still bumping along, as producer prices remain in the low 65¢/lb range. And that's likely to remain the case for most of 1987 because demand does not seem too robust. Indeed, a fractional decline in U.S. consumption from last year's 2.05 million ton level can't be ruled out as auto and construction demand top out. Global supplies look ample, too—as a small 50,000 ton first half production-consumption shortfall is offset by an estimated 100,000-ton second half surplus.

Paper

Prices continue to firm. A new $30/ton linerboard boost, for example, should take hold—pushing corrugated tags up as well. Newsprint has just moved up $35/ton—and there's talk of more hikes. Bleached board and uncoated white papers are higher, too. So is coated free sheet—though groundwood papers (hurt by new capacity) remain under pressure. Behind the upward movement: expectations of another good demand year (up 2.5%) and high (93.5-94%) operating rates.

Imported crude oil

($/bbl.)



Crude petroleum

Prices—aided by OPEC production curbs—seem to be settling in the $18/bbl range. But that should be it for a while, demand slips seasonally during the spring months. The next sustained increase (if the current one holds up) should come by fall when tags could move toward the $20/bbl range. On the other hand, any big new spurt seems remote, barring any Mideast blowup. Reason: Once oil reaches $25/bbl, it could spark new drilling both in the U.S. and in other non-OPEC areas.

Factory and office space

It's still a buyers' market. In fact, the vacancy rate for factories has surged to 5.8%—up nearly 1% from a year ago. Much higher figures are noted for Houston (14.9%), Miami

PW PREDICTS

Industrial solvents

The $2.5 billion industrial solvents market may be in for some significant changes over the next few years, according to a new Frost and Sullivan report.

Key findings include a general drop-off in overall demand—primarily because of environmental restraints, and some unevenness in end uses and individual solvents.

On the latter score, glycols (used in antifreeze and the manufacture of polyesters) should fare well. So should fluorocarbon 113—used in dry cleaners and for cleaning sensitive equipment such as electronic components—where a 7% + annual growth rate is seen. By contrast, consumption of hydrocarbons, high in toxicity and volatility, will decline.

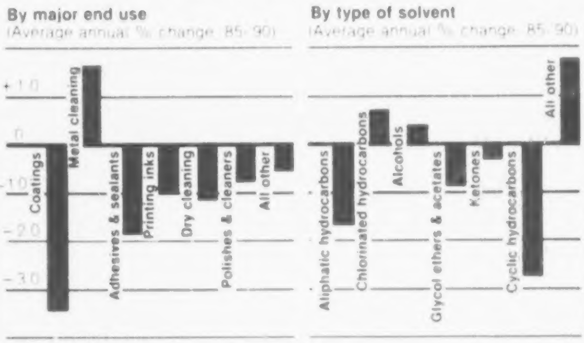
Meanwhile, on an end-use basis, paints and coatings will drop 3.4% annually between 1985 and 1990. The problem here is government regulation which has produced a "technical revolution" leading away from solvent-based formulations and toward high-solids liquid coatings, powder coatings, and water-based paints.

A somewhat less dismal, though also declining, demand curve is projected for the adhesives and sealants market. Blame the slippage here, too, on environmental restraints which are shifting the emphasis toward water-based formulations and hot melts.

The ink market for solvents will also shrink by about 1% a year as government curbs—mostly directed toward solvent recovery systems, prevent the growth of organic materials. Again, most of the decrease will take place in hydrocarbons. Also contributing to the decline: the dynamic growth in water-based flexographic inks.

There is, however, one big exception to market decline—namely the use of solvents in metal cleaning. The study foresees a 1.7% annual growth rate over the 1985 to 1990 period—with methyl chloroform and mineral spirits remaining the largest volume materials.

Industrial solvent demand trends



Source: Frost & Sullivan

(11%), and North and Central California (9.4%). There's also plenty of office space around—though both downtown and suburban area availability has flattened out. Highest downtown rates (20% or more) are centered in Dallas, Houston, Denver, Kansas City, Miami, New Orleans, Oklahoma City, St. Louis, Salt Lake City, and San Antonio.

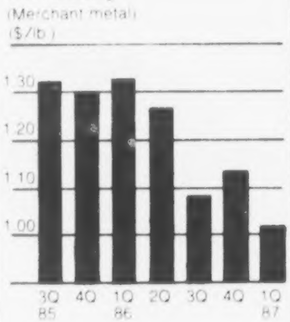
Data PBXs

Despite competitive threats from local area networks (LANs), the market for data PBX equipment will continue to grow this year—but with some possible flattening in 1988. So says International Resource Development, a Norwalk, CT-based market research firm. A principal attraction is the relatively low price compared with LAN or integrated voice/data PBX equipment. Low-end data PBXs can be acquired for as little as $100 per line vs. a typical LAN cost of more than $500 per connection. And large-scale integrated voice/data PBXs can cost $1,300 per line or more.

Lead

Tags are slipping into the mid-20s range—well under the 28-29¢/lb highs of just two months ago. Credit the drop to a relatively moderate winter which has put a damper on battery demand. Further price erosion seems likely during the next few months—though quotes should remain well above the 20¢/lb levels of last spring. As for overall 1987 demand, right now it looks as though total U.S. consumption won't top last year's 1.2 million ton level—as leaded gasoline adds to battery demand weakness.

Antimony



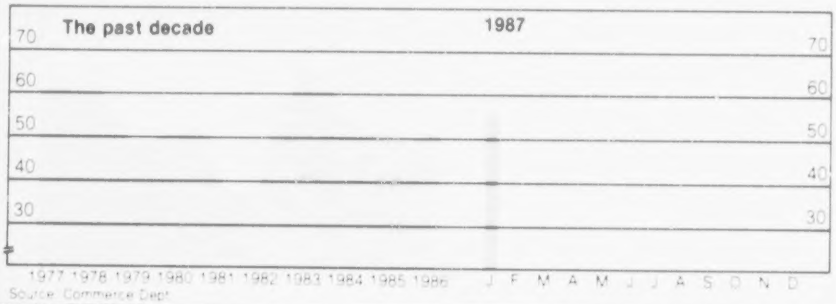
Antimony

Markets have turned easy—primarily because of an influx from China—with added downward pressure coming from cheap South African ore. Result: Merchant metal has dropped down into the $1.01-1.05/lb range—far below the $1.35/lb peak of a year ago. Oxide prices are also relatively low—averaging out at about $1.30/lb. One thing is certain—oxide imports continue to play an increasing role—with totals reaching 12 million lb over the past year. This is nearly quadruple the 3.5 million lb that entered the country in 1983.

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Good start will spill into 2Q

The year has gotten off to a reasonably good start, and there are increasing signs that the modest forward thrust will spill over into the second quarter. For example, the latest readings of the N.A.P.M. Business Barometer, a lead indicator of activity to come, are at their highest point in more than 2.5 years.

Equally significant, this index has been above the neutral 50 mark for six months. That's a sure sign that activity is on the rise.

But leading indicators aren't the only bullish factors around these days. Our huge trade deficit (with all its negative implications for GNP) finally seems ready to shrink—though it will take several more months to establish a definite trend in this critical area.

There is also some evidence that such a trend may be in the making—40% of buyers responding to a special question in the latest N.A.P.M. Business Survey noted a pickup in export orders. A few also see some indication of modest import pullback.

The consumer, too, may be a surprise—in part because of underwithholding of taxes pending clarification of the new W-4 withholding form. One analyst figures this could add as much as 1% onto GNP over the next two quarters.

Another positive sign is the Conference Board's measure of business confidence. While just a shade over the neutral 50 mark, the report notes that in every region except the Southwest, executives are anticipating increased economic stability or further gains during the first half of the year.

Even housing seems to be holding up. New permits, for instance, have moved higher over the past few months (see chart) indicating that lower (under 10%) mortgage rates will make up for a busy spring.

Further confirmation that construction is alive and well comes from the more inclusive F.W. Dodge building awards index which rose a respectable 2.5% over the latest reported month. True, non-residential building is weaker, but rising public works activity has more than offset this.

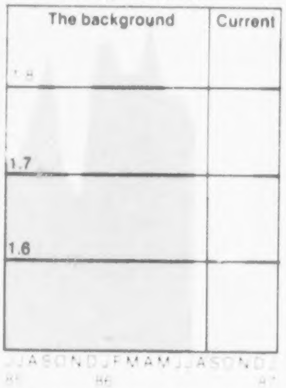
Near-term activity is also reassuring (see chart). Inventories, contrary to their historical behavior during the latter stages or a business pickup, are actually heading lower. This reflects a combination of factors: ready availability, better inventory controls, and a continuing move toward just-in-time manufacturing.

But whatever the reason, the impact of the current low inventories can't be underestimated. The current trend virtually rules out "living off inventory fat." As new or-

Leading indicators

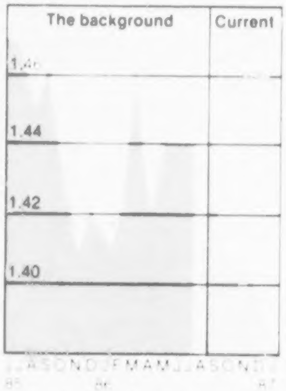
1. Housing permits

(Mil., seas. adj. annual rate)



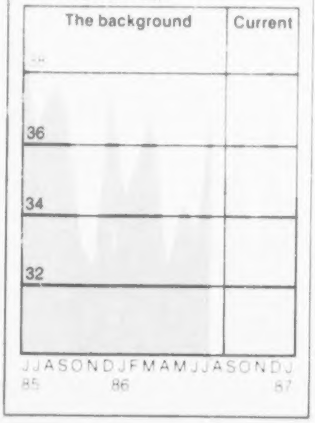
2. Factory stock/sales ratio

(Percent)



3. Capital equipment orders

(Mil. of $ seas. adj.)



ders come in, they will be quickly converted into new production.

The only problem is that new orders have been on the disappointing side in recent months. This is certainly true in the capital equipment sector (see chart) where incoming business continues to remain about the same without any discernable trend.

Point to keep in mind: These negative factors have to be weighed along with the positive ones outlined earlier. This is why *PurchasingWorld*'s economic staff foresees modest rather than brisk gains (2-3% annual rate) through spring, summer, and fall.

But that's not bad when you remember that the economy is now into its fifth straight year of uninterrupted growth.

Growth molded to high-tech

Look for engineering plastics to account for an increasing share of the average purchasing mix in the next few years.

A new study by Business Communications Co. (BCC) projects average annual tonnage increases of 4.8%. Although that's under the 15% gains of the past decade, it's still well above the general economic advance anticipated over the same period.

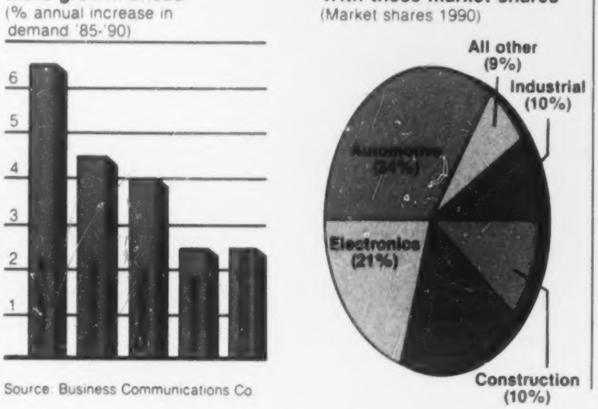
The Stamford, CT-based research firm bases its forecast on two basic trends: a shift to more complex metal replacement, and the development of specialty product systems.

The biggest emphasis will remain on alloying. Many producers are developing alloys to meet changing performance requirements. But fiber and filler compounding reinforcement is also being stressed—as is the use of liquid crystal and interpenetrating network technology.

Many suppliers of these versatile materials are also positioning themselves in the "swing" auto and electronic markets through special engineering programs (e.g. plastic bumpers) and the acquisition of high-tech firms that are well-placed in electronics.

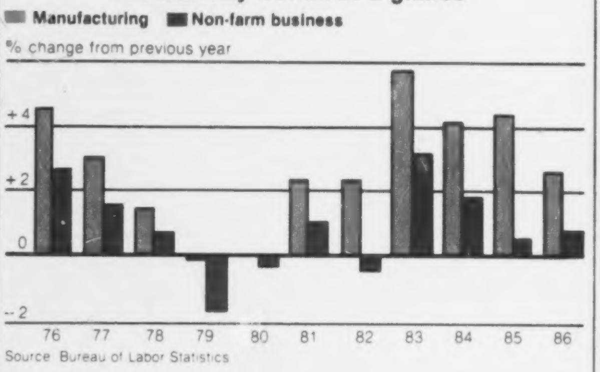
BCC also sees specialty markets on the rise. As a spokesman for the firm explains, "Producers are developing new products and product systems to fight downward pressures on the industry." As such, average annual advances of 15% are forecast for both the prototype and specialty segments of the market through 1990.

The outlook for engineering plastics



Source: Business Communications Co

Productivity trends at a glance



Source: Bureau of Labor Statistics

U.S. gets good marks for productivity

American productivity performance isn't nearly as bad as some of the purveyors of gloom and doom would have us believe. During the current business upturn (1983-86), for example, overall factory efficiency moved up at an impressive 4.2% annual rate.

So why all the talk about poor performance? Most of it stems from looking at a different set of numbers. Most analysts quote the more inclusive non-farm business productivity figures. And the numbers here are a lot lower—1.6% annually over the past four years.

This latter yardstick is lower because it is so heavily weighted with services—an area where efficiency gains are a lot harder to come by. But even here, there has been some improvement over the earlier 1976-81 period when the average non-farm business productivity advance was only 0.7% a year.

The manufacturing sector, too, has been improving its performance *vis a vis* these earlier years. So the 4.2% average gain over the past four years compares to the 1.9% average gain of the previous seven years.

The point to keep in mind is that U.S. industry has not been doing that bad a job in modernizing and cutting out waste and inefficiency. True, we haven't kept up with gains made by the Japanese and some other overseas competitors, but the numbers over the past few years are encouraging—particularly in such basic industries as autos, steel, paper, chemicals, appliances, and textiles.

Even the somewhat lower 2.7% overall manufacturing efficiency advance recorded over the past 12 months has to be regarded as fairly good. Reason: Industrial production last year remained relatively flat—a pattern that traditionally has made productivity gains more difficult to achieve.

Where do we go from here? Assume a modest industrial production gain this year (the consensus forecast), and 1987 factory productivity could well achieve a respectable 3% + gain.

Conclusion: U.S. industry is far from moribund. In fact, it is making long strides in becoming competitive in world markets—a competitiveness that could be further enhanced by the continuing downdrift in the U.S. dollar.

This month's breakdown

	Latest level (Jan)	% change from: Month ago	Year ago
Bearings	355.9	0.1	0.7
Bolts, nuts, etc	277.9	0.0	0.8
Chemicals, inorganic	292.2	−0.4	−2.5
Chemicals, organic	335.7	3.4	−7.0
Concrete products	325.2	0.2	0.1
Corrugated cartons	283.5	2.3	7.4
Cutting tools, small	294.5	−0.1	2.1
Electric lamps (bulbs)	346.3	−0.2	−0.1
Electronic components	202.8	−0.1	1.6
Fans and blowers	368.5	0.5	1.8
Foundry and forge products	363.9	0.2	0.0
Fuel oil (residual)	528.7	10.2	−39.8
Furniture, commercial	322.6	0.5	2.5
Gasoline	347.4	9.9	−34.8
Glass, flat	234.2	0.5	1.9
Glass containers	401.1	−0.2	3.1
Gypsum products	344.4	−0.9	−4.4
Hand tools	387.9	−0.2	1.6
Hand tools, power driven	242.6	0.7	3.5
Industrial furnaces	400.0	0.9	1.4
Integrating and measuring instruments	238.4	0.1	2.2
Internal combustion engines	353.9	0.0	1.6
Lubricating oil	339.9	−1.8	−9.7
Lumber millwork	320.5	0.8	2.8
Material handling equipment	297.9	0.1	0.8
Metal containers	361.4	−0.3	−0.1
Metal mill shapes (nonferrous)	298.8	0.5	−3.1
Metal tanks	299.5	0.2	−2.0
Motors and generators	352.0	−0.2	0.6
Motor trucks	324.2	0.1	5.9
Office and store equipment	156.8	1.0	1.9
Paperboard	286.0	2.6	8.1
Paper boxes and shipping containers	279.2	1.6	4.8
Paper office supplies	242.9	0.7	2.7
Paint	281.3	−0.2	1.0
Plastic resins	291.8	1.1	−3.0
Precision measuring tools	269.8	0.0	1.2
Pumps and compressors	364.6	0.2	2.0
Refractories	371.2	0.2	−0.1
Rubber belts and belting	336.8	−0.1	−0.7
Scales and balances	233.1	0.1	1.2
Steel products	351.6	0.9	1.5
Switchgear	286.4	0.2	1.4
Textiles, synthetic fibers	148.8	0.3	−2.0
Textiles, gray fabrics	150.0	0.2	−0.9
Tires and tubes	232.7	0.8	−0.8
Transformers and power regulators	236.4	0.7	1.6
Welding equipment	302.7	0.2	1.3
Wire and cable	205.4	0.3	−0.6

CURRENT PRICES

Sharp move up, but no panic

Industrial producer price averages moved up sharply (more than 1%) over the past month. But no one is pushing the panic button. Much of the jump reflects the late 1986 recovery in energy, a sector which has been recently showing signs of leveling off again.

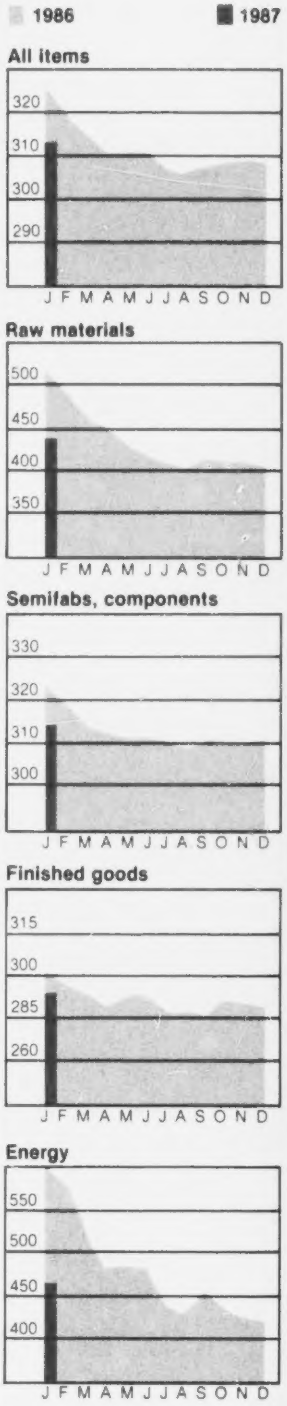
Point to keep in mind: Take energy out of the price average, and the increase in overall tags is relatively modest. Equally significant, *Purchasing-World*'s latest rundown (see table) also contains a number of declines. About 12 of the 50 product areas sport negative figures vs. month earlier levels.

A more detailed look at the changes over the latest 30-day period follows:

- **Energy:** The increases are biggest (10%) in fuel oil and gasoline. But considerable advances were also recorded in natural gas, diesel fuel, jet fuel, liquid petroleum gas, and even coal. Only electricity (off fractionally) managed to elude increases.
- **Chemicals:** Those products related to oil rose substantially—3.4% for organic chemicals, and 1.1% for plastic resins. But inorganic formulations remained soft, dropping 0.4% over the past month.
- **Metals:** It's a stand-off here. Steel lists rose, but the feeling is that this will be temporary—as USX gradually begins to hit the

Industrial prices

(Index 1967 = 100)



Source: Bureau of Labor Statistics

market again. In nonferrous, some firming in aluminum is reported. But copper is holding steady, and lead and zinc have backed off from recent highs.

- **Machinery:** A small 0.2% increase is noted. Heading higher were aircraft, communications equipment, office and store machines, printing trade machinery, metal-cutting machine tools, and transformers. This partially offsets declines noted in the auto and textile machinery spheres.
- **Paper:** Markets remain strong, as linerboard and corrugated cartons move substantially higher. Also up over the month were wood pulp, waste paper, and some fine papers.

STEEL SCENE

No sure thing in steel today

The steel crystal ball remains a bit cloudy. While the latest buyer and distributor surveys point to some near-term demand improvement, it is not certain whether there will be any lasting gains that would push 1987 industry totals back into the plus column.

As Steel Service Center Institute (SSCI) president Andrew Sharkey explains, "It is still hard to identify a single major segment or customer group that will show significant gains in 1987." Of particular concern to Sharkey is the possibility of more auto production cutbacks in the months ahead.

The SSCI executive projects his group's shipment totals at only 21.2 million tons this year—off 2% from 1986 levels.

Mill executives are also far from optimistic about the year as a whole. Consensus forecasts, for example, put total domestic consumption at only 83 million tons this year (off 6%). Shipments are also sagging to the 65-66 million ton mark.

Nor are all the current questions limited to demand. More service centers see increases than decreases over the next six months—but it's not unanimous. A few are beginning to wonder about overall firmness and see possible declines of 5% or more.

Sharkey confirms this price uncertainty. At a recent talk before the Central States chapter of the SSCI, he noted the possibility of significant price swings and volatility in flat-rolled pricing in the first half of 1987—adding that there is a 50-50 chance that these products could collapse and head lower than 4Q 1985 levels.

Low foreign steel tags, especially in stainless, could also exert some downward pressure on prices. The latest SSCI survey shows that 71% report lower-than-domestic incoming stainless tags.

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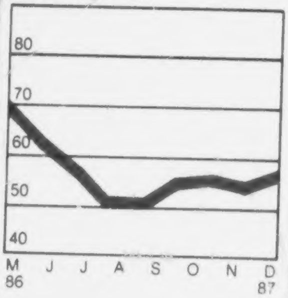
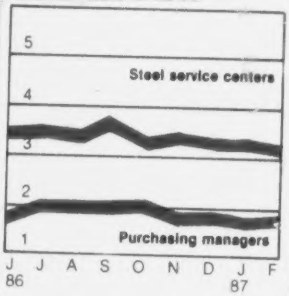
BUSINESS DATATRAK

Steel

Operating rates

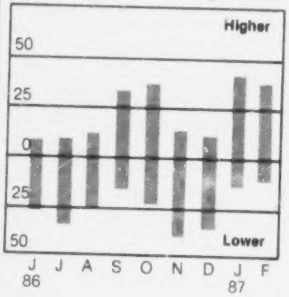


Inventories
(Months supply on hand)

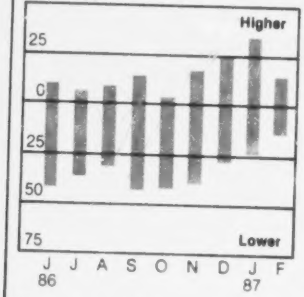


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 14%
SAME 50%
SLIGHTLY BELOW 36%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 0%
SAME 83%
5-10% BELOW 14%
10-20% BELOW 3%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

And 18% say the price differential is in the 11-20% range.

These same distributors suggest that overseas carbon steel bargains are a bit harder to come by these days. Buyers would seem to agree on this latter point. While 36% say imports are cheaper, not a single respondent says import prices are "substantially" less than U.S. quotes.

But despite this, the typical steel buyer does not seem ready to cut back on imports. Approximately 32% say they expect to be even more dependent on imports over the next six months—compared to only 4% who anticipate less dependence.

More important, this 32% figure is the highest in some years. If what these PMs say is true, then current predictions of a fall-off in steel imports could be based on wishful thinking rather than on solid fact.

There is agreement, however, on inventory trends. Everyone seems to agree that holdings can be pared even more. Thus 41% of responding service centers say their steel stocks are too high vs. only 9% who believe they are too low.

A similar picture shapes up on the buyer front where the too high/too low ratio (29/7) is equally impressive. It's not surprising that nearly half of the PMs queried say they'll be aiming for lower steel inventories over the next six months.

The reasons for this are obvious. Aside from the need to cut costs, other key factors are: 1) today's better inventory controls, 2) the gradual shift to just-in-time manufacturing, and 3) ready availability (especially now that USX is back in the fray).

Only one product is mentioned by buyers as a possible problem area: coated sheet. And even here concerns have diminished a bit from late 1986.

PROCUREMENT STATUS

Relief for those tired of waiting

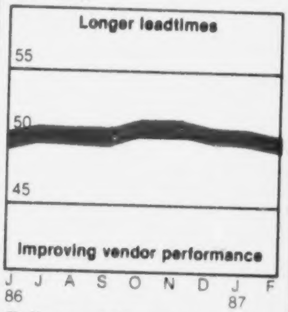
Demand may be up a bit, but you'd never know it from looking at the latest availability statistics.

Purchasing World's exclusive leadtime index, for example, has again dropped below the neutral 50 mark—suggesting a slight shrinkage in average waiting times over the past month or so. And only 8% of purchasing executives responding to the latest N.A.P.M. vendor delivery survey report slowdowns.

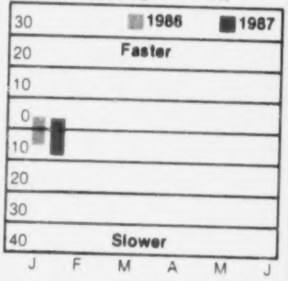
Moreover, this latter series may show some ad-

Monthly procurement status report

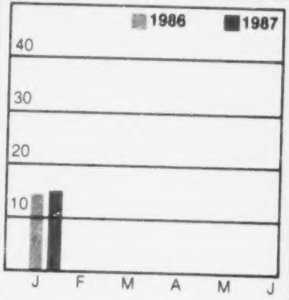
Leadtime index
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



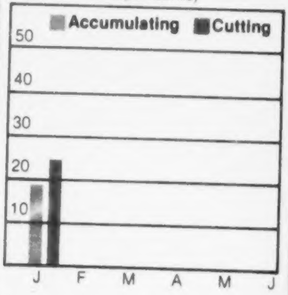
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

ditional improvement when the next report is out. Reason: Much of the current slowness is traceable to the lingering effects of the long USX steel strike.

Also indicative of easiness is the fact that only 16% of the respondents are now committing 90 days or more in advance for production materials. Conversely, the number buying on a 30-day or less cycle has jumped to 59%.

The same pattern is evident in the maintenance, repair, and operating (MRO) sector. Specifically, 88% now say they are committing 30 days or less in advance for MRO items—up from the 86% figure of just 30 days earlier.

Finally, there's the continued foot-dragging on inventories which would ordinarily not be taking place at a time of rising activity. The reason is increasing buyer confidence in the ability to get what is wanted or needed. In any event, the latest inventory figures show 25% still paring vs. only 19% who say they are accumulating.

No one seems worried about the future. Most PMs see the current easy situation continuing indefinitely. As one East Coast buyer puts it, "Three factors—the absence of major strikes, continuing strong imports, and operating rates below preferred—have to be regarded as major pluses."

Leadtimes and availability

Chicago: A few changes in steel—with higher leads (in weeks) noted for coated and galvanized sheet (12) and hot-rolled bars (6-7). But c-r and h-r sheets are in (to 8), as are aluminized sheet (to 9-10) and plates (to 4).

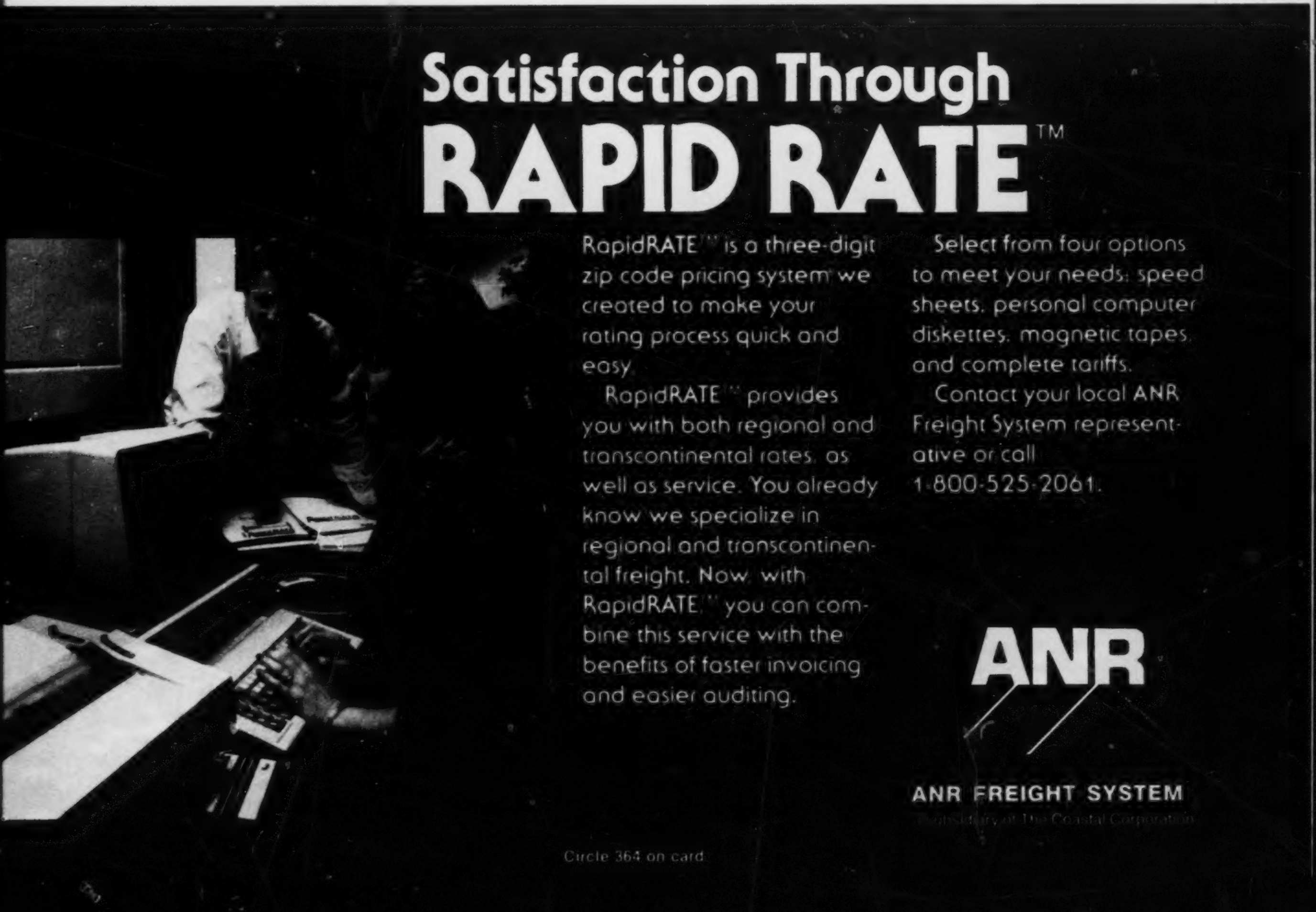
Cleveland: Small changes include a stretchout in hardwood lumber (from 1-2 to 2-3 weeks) and natural kraft paper (from on-demand to 1). But steel canisters are in a week (to 1).

Los Angeles: A modest trend toward shrinkage is noted, with these weekly leads: Aluminum tubes (4-6), grey iron castings (4-5), brass castings (6-8), domestic fasteners (6-8), and custom seals (12-14).

Houston: Galvanized steel coil from domestic mills has moved out 5 more weeks (to near 19). Metals are holding steady at 0-4. Ditto, plastic resins (4.5), corrugated boxes (3.5), steel fasteners (2), plastic bottles (6), structural steel (12-21), and imported heat exchangers (30-39).

Philadelphia: MRO items remain relatively easy with these weekly leads: cutting oils and lubes (4-6), paper towels and tissues (1), standard drills, taps, and polishing wheels (2-4), standard grinding wheels (4-6), and special grinding and polishing wheels (12). No change in steel coil (8-10).

Pittsburgh: Zinc has come in a week (to 2). But most other products are marking time as follows: corrugated (3-4), wirebound boxes (4-5), drums (1), fiberboard and chipboard (3-4), waterproof papers (8), plastic packaging materials (2-3), lumber (3-4), plastic resins (5-6), and fabricated copper from mills (6).



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BUSINESS DATATRAK

Leadtimes (in weeks)

STEEL	Now	Month ago	Six months ago
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	8	10	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	4	4½	2½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	6½	4½	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	10	6½
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	17	17	17
Tubing (Phil)	3½	3½	3½
Grey Iron Castings (LA)	4½	9	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	14½
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	9	9	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

LUMBER	Now	Month ago	Six months ago
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	1½	1½
Plywood (Chgo)	3	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	½	½	½
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	13	13	11
Brass Castings (LA)	7	9	7
Brass Rods (Chgo)	9	9	9
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	7	7	4
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	3	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	9	7
Fasteners, Std. (Phil)	3	3	2½
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	26	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	24	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	17
Welding Supplies (Hous)	5	5	5

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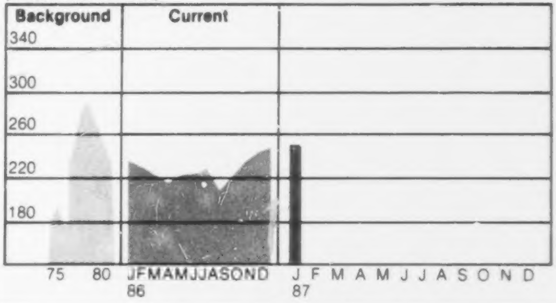
BUSINESS DATATRAK

Raw material price barometer

Latest month 253.0
Month before 247.5
Year ago 236.9

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt.	31.00	31.00	31.00
Steel, plates, Pitts., cwt.	18.25	18.25	18.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	25.90	25.15
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.570	.535	.563
Antimony, N.Y., dealer, lb.	1.03	1.05	1.32
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb.	1.29	1.29	1.30
Brass, yellow, [sheet], lb.	1.24	1.24	1.25
Cadmium, N.Y., dealer, lb.	0.95	0.97	0.90
Copper, electrolytic, wire bars, refd., lb.	.65	.65	.67
Copper sheet, over 24 in., lb.	1.38	1.38	1.39
Lead, common, N.Y., lb.	.26	.28	.18
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	210.00	220.00	250.00
Molybdenum, oxide, dealer, lb.	3.07	3.10	2.70
Nickel, cathode, dealer, lb.	1.70	1.70	1.88
Platinum, dealer, oz.	524.00	534.00	353.00
Silver, N.Y., oz.	5.54	5.57	5.91
Tin, N.Y., dealer, lb	3.17	3.13	3.40
Zinc, Prime West, East St. Louis, lb.	.38	.41	.34
Zinc, die casting alloy, No. 3, lb.	.465	.525	.415
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.29	16.38	16.15
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	550.00	550.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	330.00	320.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.238	.243	.236
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.085	1.060	1.045
Cotton middling, 1", N.Y., lb.	.530	.545	.600
Printcloth, 48", 80x80, N.Y., spot, yd.	.95	.90	.66
Army duck, 37", 13 oz., yd.	1.405	1.400	1.500
Blended printcloth, 64", 78x54, yd.	.82	.80	.75
20s combed yarns	1.77	1.74	1.95
Wool 64s, Staple, lb.	2.00	1.90	1.80

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal.	1.20	1.15	1.05
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.29	.29	.31
Polypropylene, homopolymer grade (market price), lb.	.345	.325	.350
Polystyrene, general purpose grade (market price), lb.	.39	.36	.35
Polyvinyl chloride, pipe grade (market price), lb.	.305	.295	.260
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.26	.25	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	152.50	152.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.77	.73
Xylene tanks, gal.	.765	.765	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	322.90	326.75	303.90
Lumber 2x2 pine, mbf, cl	314.40	318.65	294.95
Plywood, plyform, ¾", msf, cl	585.05	584.10	567.95
Plywood, ⅝", msf, cl	384.95	382.60	377.00
Cement, bulk, ton, tl	63.28	63.63	65.92
Sand, ton, cl	6.70	6.62	6.41
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.07	48.27	47.94
Crushed stone, 1½", ton, cl	8.08	7.83	7.82
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.84	0.84	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	213.52	213.87	207.69
Brick, common, per thousand, tl	186.96	186.42	184.06
Asphalt paving, AC-20	124.05	124.19	174.14
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.36	7.36	7.14
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	14.75	15.00	14.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	20.75	19.25	22.50
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.585	.485	.625
Gasoline, 94 oct., reg., Chi., tank car, gal.	.510	.500	.578
Heating oil, No. 2, Chi., bulk, gal.	.488	.500	.630
Heating oil, No. 2, N.Y., bulk, gal.	.498	.483	.545
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.478	.530	.520
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.430
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	83.00	80.00	77.00
Steel, No. 1 hvy., dlvd., Chi., ton	77.00	77.00	76.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.555	.560	.575
Copper, No. 2, East, wholesale buy, dlvd., lb.	.480	.480	.505
Brass, red, East, wholesale buy, dlvd., lb.	.515	.520	.535
Brass, yellow, East, wholesale buy, dlvd., lb.	.330	.330	.290
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.355	.340	.350
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.380	.365	.370
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.150
Lead, clean solids, East, wholesale buy, dlvd., lb.	.155	.155	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	28.00	25.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	22.00	20.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.090	.095	.120
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.110	.110	.140

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Great freight rates in store

There's good news from Wharton Econometric's transportation analysts. They say to figure on another year of relatively small freight rate increases. In a new report prepared especially for *Purchasing World,* these analysts peg the overall 1987 advance at just 2.5%—not much above last year's 1.2% boost.

The new estimate is also slightly lower than the figures suggested six and three months ago when the Wharton model called for advances of 3.3% and 2.7%, respectively.

But 1988 could present some problems. Wharton sees the increase that year accelerating to 4.2% because of stronger demand for freight and additional cost pressure stemming from higher energy prices.

In their first estimates for 1989, Wharton analysts see even further acceleration. Specifically, the overall increase that year is put at 4.9% as demand and energy factors continue to put upward pressure on rates.

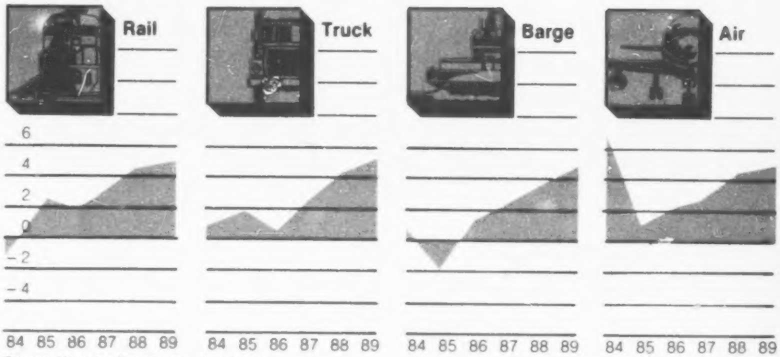
But these overall rate forecasts tell only part of the story. As in the past, there should be significant mode-by-mode differences. Key areas shape up along these lines:

- **Rail:** Only a 2% rate increase was posted in 1986 because of relatively flat ton-miles (0.3% rise to 880 billion) and a 0.5% decline in car loadings. There probably won't be any big changes in 1987 either.

While intermodal is expected to continue to be the strong traffic sector, this too, points to continued price moderation due to competition from low-cost, non-union trucking.

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

Price hikes for 1987 are expected to average 2.8%. In 1988, however, rising input costs and increasing demand will feed through the system and push prices up 4.3%.

- **Trucking:** Carriers are optimistic that there will be some gains in freight volume this year. But these demand increases are not likely to translate into very sizable price increases. Reason: The industry is looking into improved efficiency, low fuel costs, and continued productivity gains—all of which should help offset the effects of intense competition, higher union wage costs, and heftier insurance premiums.

As a result, truck rate hikes should be held to 2.4% this year after the miniscule 0.9% rise of 1986. But next year and in 1989, as both fuel prices and activity heat up, price hikes should accelerate to 4.2% and 5.0%.

- **Barge:** This sector continues to suffer from overcapacity—a situation which has led to discounting and a net decline in prices since 1982. However, there is optimism in the industry that the problem is slowly being corrected as operators continue to scrap units and reduce the barge surplus. The nation's international trade imbalance is also holding prices down because it is difficult for ocean ships to find loads for their return trips.

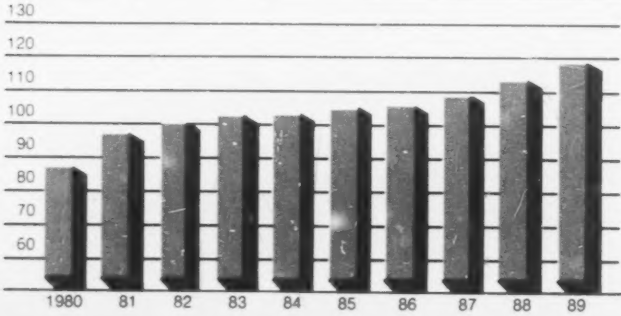
But this problem should also slowly abate. The decline in the dollar has already helped exports of certain commodities. Watch for water rates to edge up 2.3% this year, and for the acceleration to continue over the longer pull. Even so, rate increases here will continue to be the lowest of all modes, averaging 4% over the 1988-1989 period.

- **Air:** Passenger service was very strong in 1986 and freight was up 10.6% in the first 11 months. Price increases averaged only 2.1% as lower oil prices reduced cost pressures and active competition. Mergers and acquisitions also continued to provide a fertile environment for price wars.

This year, air freight should remain healthy although passenger traffic growth may ease up a little. As for prices, only a slight acceleration to 2.8% is forecast for this year. But in 1988, as fuel and other costs climb, rates are targeted to jump 4.4%. **PW**

PurchasingWorld freight rate index

(1982 = 100)



Increase over previous year	
1980	14.9%
1981	10.7%
1982	2.7%
1983	2.9%
1984	0.5%
1985	1.6%
1986	1.2%
1987	2.5%*
1988	4.2%*
1989	4.9%*

*Estimated

Buyers find little to worry about

Robert S. Reichard, executive editor

Buyers of transportation services say they may have to pay a bit more in 1987 for rail, truck, water, and air transportation services, but they're confident that increases will stay in the relatively low 2-3% range. And there will be plenty of opportunities for discounting and other forms of price shading.

That's the opinion of most purchasing executives in the recent ***Purchasing World*** transportation survey. Purchasing managers say that their projections are based on more than wishful thinking. In fact, their projections are in line with those of Wharton Econometrics in its exclusive quarterly transportation report for ***Purchasing World*** found in this issue.

PMs base their forecasts on these factors: 1) excess carrier capacity in all key modes, 2) relatively modest upward labor and energy cost pressures, 3) the continuing competitive climate fostered by recent deregulation, and 4) another year of moderate demand gains.

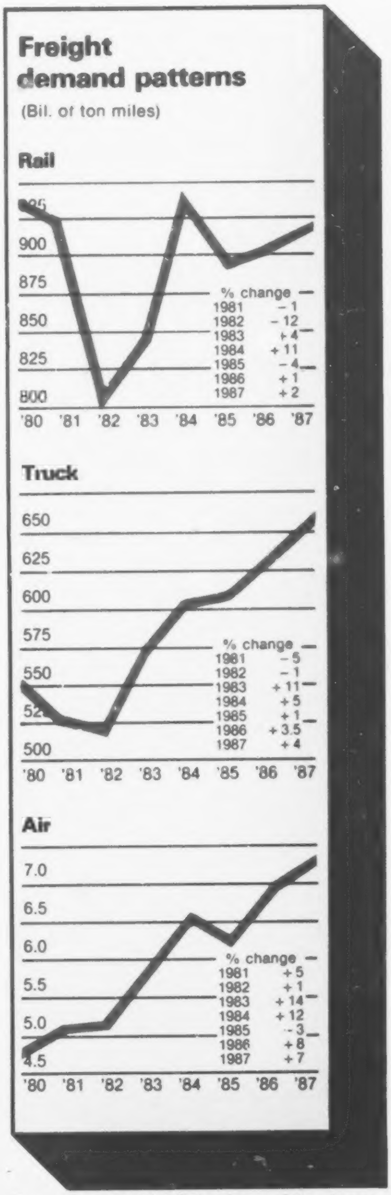
On the latter score, rail ton-miles this year aren't likely to rise by more than 2%. While above last year's advance of less than 1%, that would still leave totals under the 932 billion ton-miles shipped in 1980 (see "demand" chart).

The demand picture is more positive for trucking. Last year, for example, total tonnage rose about 3-4%, with a similar advance seen for 1987—but that's hardly enough to fill up all of today's empty trucks.

Even truckers admit that competitive pressures are fairly strong these days. Preston Trucking, a large Mid-Atlantic LTL carrier, recently said it expects a 4% April rate increase to gradually erode 0.5% per month over the rest of the year.

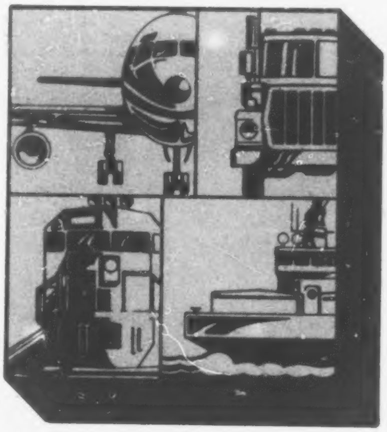
This fluctuating rate picture is further reinforced by our survey which suggests the following overall patterns:

- **1987 rate trends:** Four out of five respondents hope to hold this year's advance to 3% or less, and only 3% put gains in the 7%+ range (see "survey" chart). And, at the other end of the spectrum, it's hard to ignore the fact that 14% of those queried actually expect to do better ratewise in 1987 than they did last year.
- **Modal shifts:** About 20% say they have been making changes to effect costs savings. Some, for example, have moved from rail to truck or from truck to air—in many cases to meet the speedier delivery needs of just-in-time inventorying. And others say they have done one or more of the following: 1) shifted from multiple to single carrier sources, 2) put more emphasis on discount LTL carriers, or 3) are in the process of liquidating in-house trucking operations because of high insurance costs.
- **Contractual agreements:** An impressive 36% say they are continuing to move in this direction—with as much as 50% of their freight moving under contract. Savings vary depending on bargaining clout and competitive conditions in individual areas. One firm tells of saving as much as 30% by using contract carriers looking for "backhaul" business.
- **Transportation specialists:** This approach has become increasingly popular—especially for international shipments. Some 32% of survey respondents admit to some involvement with brokers, agents, shipping



Source: Transportation Policy Assoc., PW estimates associations, and the like. While cost is certainly a factor here, other considerations include convenience, time savings, and reliability.

- **PM involvement:** PMs say they are involved in virtually all aspects of the transportation buying decision. More to the point: 93% of the respondents indicate that they are currently responsible for designating inbound freight; 57% say they play a major role in negotiating contracts; 61% designate outbound freight; and another 29% help determine the actual routing.



A hotly contested year

PMs agree that it is going to be another hotly competitive year with discounts readily available for those willing to take the time to press hard enough for them. One LTL carrier spokesman observes that "most shippers of unitized or palletized freight can get at least a 45% discount from any carrier today—providing that there is significant volume."

Buyers also note that the fiercest competition will be among the big trucking companies that dominate the LTL market—carriers that ship loads averaging 700-800 lb across the country, sort them at intermediate warehouses, and then put them on smaller trucks for local deliveries.

But not everything is coming up roses. Several PMs feel that more mid-sized carriers could bite the dust if they get caught in a squeeze between the low operating costs of start-up companies and the pricing, service, and size advantages of the big national carriers.

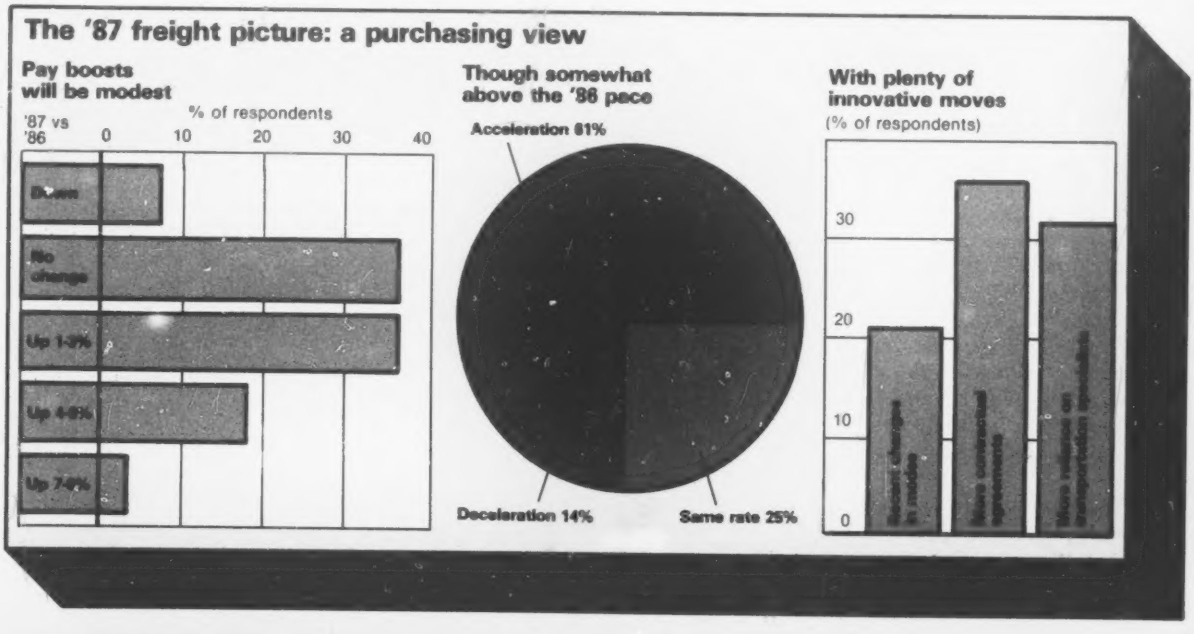
On-time deliveries are another common concern, although this doesn't seem to be an across-the-board problem at this time. Other complaints mentioned by PMs include wet shipments, damaged goods, and price increases from the time of original quote to the time of delivery.

At least one shipper would also like to see less state interference in today's basically free market. He cites new re-regulating moves on the part of at least one state—California.

Despite this less-than-perfect freight environment, shippers remain quite happy about overall carrier performance. In response to a question on carrier service, 21% evaluated it as being "excellent" and another 68% dubbed it as "good." More significant, only 11% rated carrier performance as just "so-so"—and not one single respondent felt it was "poor."

Agreement is widespread that, from the transportation buyer's point of view, this will be another good year for both carrier performance and rates. As one Midwestern buyer puts it, "There's little to complain about service. While we may have to pay a bit more, it won't be all that much more. With a little arm-twisting, I think that in some areas we may still be able to hold the price line at last year's levels."

PW



The '87 freight picture: a purchasing view

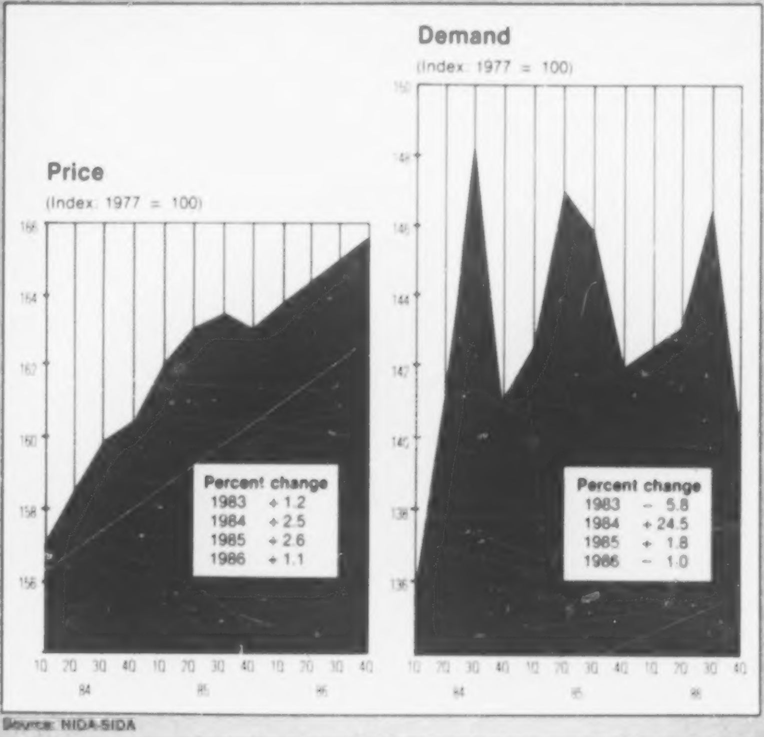
MRO market at a glance

MRO markets remain very competitive as relatively flat demand and ample or even excess supplies keep a tight lid on tags.

Over the past year, for example, average quotes moved up by just 1% (see accompanying chart). That's actually under the 2.5% advances noted over the previous two years.

And dollar sales—hurt by flat industrial production (and real declines in such old-line industries as oil, metal, and machinery)—edged down by about 1%. The drop in physical or volume terms, after factoring in the 1% price advance noted above, was probably more on the order of 2%.

Distributors are expecting some demand improvement this year. But the accent should be on the word "expect"—because little change over 1986 patterns has been noted over the past month or two.



Source: NIDA-SIDA

uct of the automatic replenishment process. For example, the mainframe computer can be programmed to produce a printed daily transaction report—a listing of all the replenishment request information transmitted the previous day to the mainframe computer. This report can include information on items ordered, closing balance figures, indications that minimums for certain items are approaching, and shipped-on-invoice messages that allow for easy location of shipments.

The computer can also be programmed to use packing ticket/receiving ticket/invoice data to summarize and tally prices of issued materials during the month. This account distribution report can identify individual users, date of issue, quantity, and the associated materials costs. It thus provides an exact record of where MRO dollars are being spent.

Using data generated as a byproduct of the automatic replenishment process, the computer can produce monthly and quarterly journals for all items purchased for the current period and the year-to-date. This single report allows management to review the activity or inactivity of all items and, if necessary, to reduce inventory by adjusting minimums and eliminating obsolescent stock.

Converting to an automated system

The transition from conventional inventory management programs to total automated procurement is relatively simple. In conventional systems, replenishment is triggered when the balance-on-hand reaches that predetermined level known as "bin reserve." At that point, the clerical cycle of requisitioning, ordering, receiving, and storing begins. The quantity on hand has reached the "bin level" by attrition, and the uncounted "active" supply of the item is issued at will.

Converting to an automated system doesn't change the method of doling from uncounted stock. Instead, the quantity of "active" supply is reduced as before, but a "surplus" quantity of the item remains packaged and is kept in the same bin or other reserve location until it is needed.

Under this method, when the "active" quantity requires replenishment, a box of the "surplus" is brought out, and a usage card with the opened box quantity is transmitted to the computer. The computer reduces the surplus quantity on hand and compares that figure with the minimum quantity allowed. If the balance on hand is equal to or less than the minimum, it will automatically trigger a replenishment to bring the surplus quantity on hand back to maximum.

This method does not add any additional material to inventory. It simply divides the quantity on hand into an active supply and a bin reserve.

In time, monthly and quarterly journals will reveal the quantity used and the number of occasions when the active supply is replenished from surplus. Companies using this method have found that it reduces their floor stock and surplus inventories by at least 25%.

Moreover, the new method eliminates requisitions, purchase orders, receiving reports, bin locator cards, and the posting of received quantities. **PW**

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PURCHASINGWORLD VOL. 31. NO. 4. APRIL 1987

Office Products

Packaging products that really pack 'em in

Bid system cuts freight costs, improves service

Making the best quantity buy with PCs

PurchasingWorld®

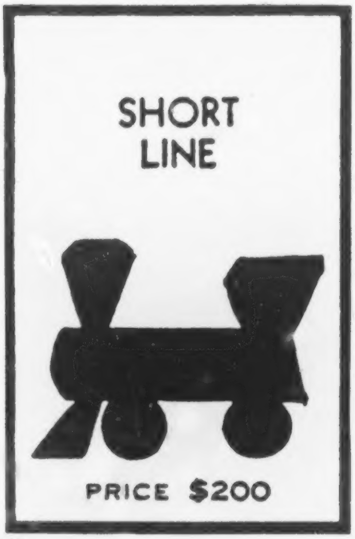
Helping you manage the business of buying

April 1987 Vol. 31 No. 4

Special Report: Office Products

36 Office market is fair game for bargain hunters
The message of this in-depth report on the office products market is clear: If you can't cut a deal, you aren't really trying. Price and demand trends tell the story.

40 In office supplies, it's what you buy and how you buy it
We asked office supplies buyers nationwide how they unravel the mysteries of the supply cabinet. This report shows that it takes real buying savvy to make dollar sense out of all those pens, pencils, and paper clips.



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Ingersoll-Rand uses computerized transportation data to prepare "bid packages" that help untangle deregulated freight rates.

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PurchasingWorld pulled it all together for packaging buyers—Here's a roundup of what's new and promising in new packaging innovations.

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What goes down must come up again. That adage is in line with DRI's projection which calls for a 1.6% boost in industrial commodity tags this year—after a 3.7% drop in 1986.

94 Showtime highlights, or where the buyers are
Miss the SAE exhibit or the Spring National Design Engineering Show this year? Fear not, because *PurchasingWorld* walked the shows for you. Here's a sampling of the innovative new products we saw.

100 Enter the 1987 Crystal Ball Competition!!
It's that time again—Get out your crystal balls and see if you can conjure up an accurate forecast for the 1987 economy. Contest details and entry form are here.

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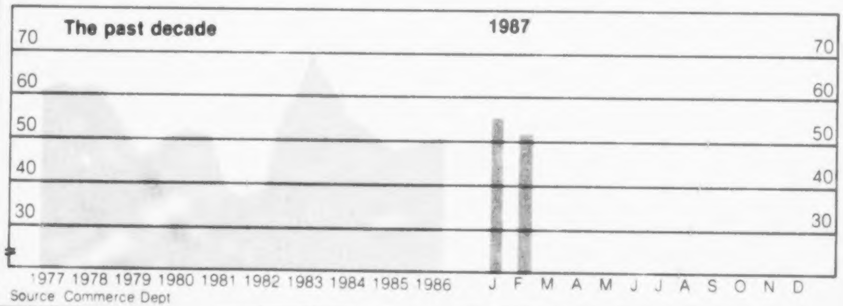
BUSINESS DATATRAK

N.A.P.M. business barometer

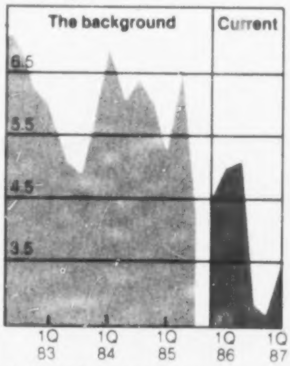
Based on five indicators (employment, inventories, new orders, production, vendor performance)



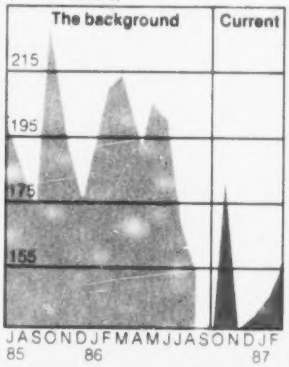
Source: Commerce Dept

Leading indicators

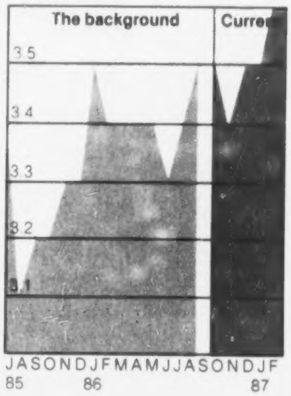
1. Savings ratio
(Percent)



2. Machine tool orders
(Mil. of dollars)



3. Factory overtime
(Hours)



KEY ECONOMIC TRENDS

Where's the beef in this bull market?

The economy continues to edge up but advances are not robust. Average annual rates of gain are only expected to be 2-2.5% over the first two quarters of the year.

Blame the sluggishness on the fact that there is not one big sector to spearhead any significant advance. Thus consumers are taking a breather after their late 1986 buying binge. So are businessmen who beefed up late 1986 orders for capital equipment because of the changing tax laws.

The government is not showing any signs of big new gains, either. Federal spending will be up about 4% this year but that's far below the 7% jump in 1985.

Not surprisingly, most indicators of future activity are just barely in the plus column. The N.A.P.M. Business Barometer, for example, registered only a mildly bullish 51.9 over the latest reported month (50 is neutral). That's well under the 55+ levels that have traditionally indicated a major business pickup.

A closer look at the savings rate (savings as a percent of spendable income) points up the problems in the consumer area. The typical family spent as if there were no tomorrow last fall—the savings rate tumbled to 2.5%. That was one of the lowest figures in history and not sustainable over the long term.

The rate is already beginning to rise (to 3%+—see chart), suggesting that consumers are thinking twice or even three times before making any new big-ticket purchases. This shows up most clearly in the auto sector where first quarter sales came to only 10 million units vs. 13.2 million and 11.5 million units of the third and fourth quarters of 1986, respectively.

About the only consumer sector remaining strong is housing. That's primarily because of falling interest rates which have apparently been important enough to sustain starts at a high 1.8 million annual rate.

This is hardly enough to impact positively on GNP. Reason: Last year's figure was also around 1.8 million units. So it looks like housing will remain a neutral factor.

Fixed costs drive up auto expenses

Owning and driving a new car will cost you 40-63¢/mile, according to Hertz. The new estimates are based on the assumption that the new vehicle will be driven 10,000 miles per year and held for five years.

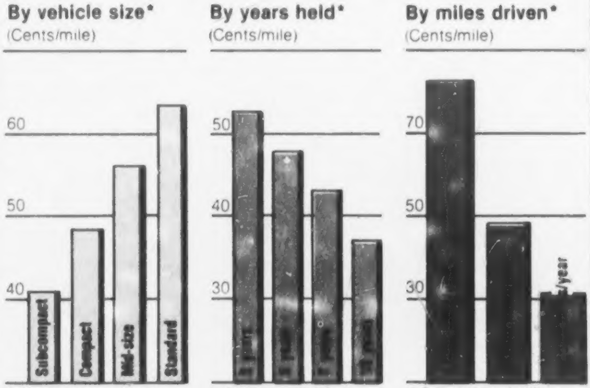
Subcompacts are cheapest. The 63¢/mile estimate relates to the dwindling number of standard sized cars that are still being sold. Cost for popular compact models average about 49¢/mile.

The new study also points out that costs vary substantially according to how long the car is kept. So the 49¢/mile compact (5-year possession) rises to 52.7¢/mile for 3-year trade-ins and falls to 42.8¢/mile for a vehicle held seven years.

Similarly, cars driven fewer miles per year cost more. The 49¢/mile cited for a compact driven 10,000 miles per year, for example, rises to 85¢/mile when driven only 5,000 miles but drops to 30.8¢/mile when driven 20,000 miles.

Other key findings of the new Hertz study:

- About 75% of all outlays are for so-called "fixed" expenses such as depreciation, interest, insurance, licenses, taxes, and fees. "Variable" costs (gas, oil, maintenance, repairs, etc.) make up the remaining 25%.
- Fixed costs have risen fastest over the past year because of higher purchase prices and the big jump in insurance premiums. On the other hand, variable costs have actually declined a bit because of lower gasoline tags.
- New cars, at latest report, were being kept an average of 5.2 years vs. 3.6 years 10 years ago. The average age of a vehicle over this same time span rose from 5.7 to 7.6 years.
- Used cars generally cost a lot less because of lower fixed costs. Savings normally run about 20-50%—with an average of 40%.


How new car costs vary
(Ownership & operating costs)

* Assume car is driven 10,000 miles per year for 5 years

* Compact car driven 10,000 miles per year

* Compact car held for 5 years

Source: Hertz

A purchasing-oriented look at 1987 commodity tags

Office supplies & equipment	
Computer	-5%
Fine paper	+5%
Office supplies	0
Furniture	+2.5%
Printing	+3%
Forms	+2.4%
Toners & developers	0

Engineering & housekeeping	
Paper products	+3%
Polyliners	+0.4%
Chemicals & cleaning products	+1%
Fuel oil	+2.5%
Utilities	+2%
Batteries & lamps	0
Plant maintenance supplies	+2%
Paint	+3%
Electrical	-2%
Plumbing	+3%

Food	
Dairy products	
Milk	+3.5%
Cheese	+1.3%
Ice cream	+2.4%
Yogurt	+3%
Bread & fresh baked goods	+2%
Fruits	+0.5%
Vegetables	+0.5%
Citrus juices	+3-8%
Other juices	+0.5%
Oil & shortening	+2%
Fish	+5%
Meat & poultry	
Beef	+0.4%
Pork	+0.5%
Lamb	+0.3%
Veal	+1.4%
Poultry	+1.5%
Eggs	+2%

Other foods	
Dry goods & other products	+3%
Coffee & tea	+0.4%
Soft drinks	0
Sauces, dressings & condiments	+0.3%
Frozen desserts	+0.4%
Dietary supplies	
Paper, film, foil, disposable cups & containers	+3.5%
Cutlery, glassware, china	+5%
Dietary detergents	+0.5%

Source: Joint Purchasing Corporation

Price outlook is rosy

Budget for another year of relatively modest price boosts, according to William V. Doll, president of New York's Joint Purchasing Corp.

Doll, who spends about $125 million in annual purchases for health care and other service outfits, sees little on the near-term horizon to suggest any major runups. His current projections are actually more optimistic than the preliminary ones he made for 1987 just a few months ago in *PurchasingWorld.*

Two factors lie behind his current, rosy outlook: 1) oil prices which should not be rising as much as he had originally projected, and 2) the failure of competitive pressures to diminish despite the fact that 1987 marks the fifth consecutive year of general business upturn.

Here's a rundown of some of Doll's more specific forecasts:

- **Office supplies and equipment:** Computer prices should fall 5%. There will be no appreciable change in office supplies. Although paper, printing, and furniture will be rising, none of these categories is expected to rise more than 5%.
- **Engineering and housekeeping:** The outlook here is similar. Only electrical supplies are expected to decline. Nothing else will rise by more than 4%. Plant maintenance supply is expected to go up only 2%.
- **Food:** Last fall's bumper harvest is assuring another low-cost procurement year. The only notable increases are seen for fish (+5%) and citrus juices (+3-8%). But little or no increase is projected for soft drinks, coffee, and tea.

Doll points out that increases could be a bit less than his generalized forecasts indicate for those covered by his Group Purchase Agreements. He also suggests that this is the time to make long-term contracts to take advantage of the low numbers and competition which he feels aren't going to last forever.

BUSINESS DATATRAK

CURRENT PRICES

Prices teeter while energy totters

Industrial producer prices, still feeling the impact of recent energy advances, moved up another 0.7% over the past month. Nevertheless, this bellwether inflation yardstick remains 1% under year-ago levels.

Gains in energy have been fairly pervasive. Solid increases have hit gasoline, home heating oil, diesel fuel, residual fuel, jet fuel, and liquid petroleum gas. Result: The overall energy and fuel index (see chart) rose 3%.

A modest increase was noted in other areas, too. Construction materials, aided by a mild winter, showed broad increases for sand and gravel, plywood, softwood and hardwood lumber, cement, plumbing fixtures, and brass fittings.

Paper is another area with a pronounced upward tilt. Corrugated boxes continued to rise and at latest report were running 10% ahead of a year ago. Also advancing over the last month were paperboard and paper office supplies.

Textiles were buoyant, too—with a big jump coming in grey goods. Increases also hit other product lines such as leather, fertilizers, aircraft parts, and internal combustion engine parts.

Chemical and plastic prices also edged lower. But judging from current industry announcements, both these sectors should be back in the plus column next month.

Metals, in the meantime, show little discernible trend. Aluminum rose sharply and steel edged a bit higher, but both lead and zinc tumbled.

Competitive pressures also seemed to surface in the machinery category—with the overall reading for this group off 0.3% over the past 30 days. Sparking the fall were declines in motor vehicles, aircraft, and railroad equipment. On the other hand, both chemical industry machinery and engineering and scientific instruments inched ahead.

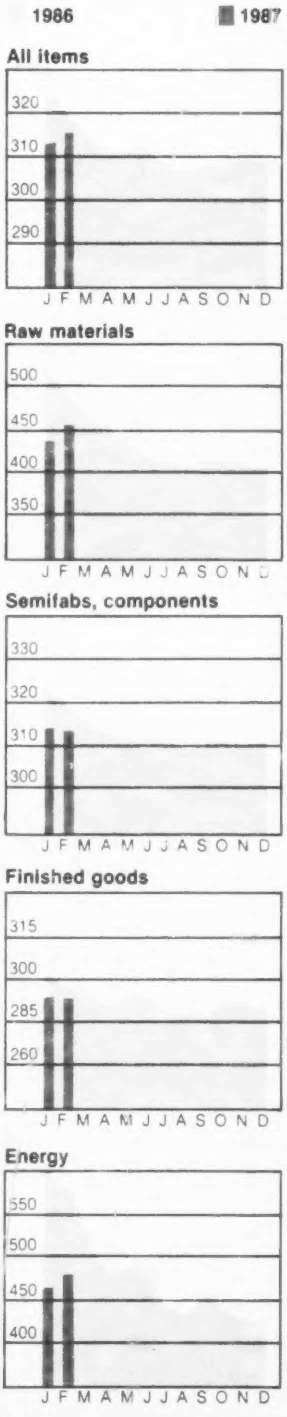
Commenting on the overall trend, one government official said he expected the new leveling off in energy to slow down near-term increases. Specifically, he sees 2Q price

This month's breakdown

	Latest level (Feb)	% change from: Month ago	Year ago
Bearings	356.3	0.1	0.8
Bolts, nuts, etc	278.0	0.0	−0.1
Chemicals, inorganic	292.5	0.1	−1.5
Chemicals, organic	334.8	−0.3	−4.8
Concrete products	325.1	0.0	0.0
Corrugated cartons	289.8	2.2	10.1
Cutting tools, small	293.6	−0.3	1.5
Electric lamps (bulbs)	347.8	0.4	−0.8
Electronic components	203.3	0.2	1.7
Fans and blowers	369.9	0.4	0.7
Foundry and forge products	363.0	−0.2	−0.6
Fuel oil (residual)	625.2	18.3	−17.4
Furniture, commercial	323.0	0.1	2.6
Gasoline	368.8	6.2	−22.0
Glass, flat	234.4	0.1	2.0
Glass containers	404.7	0.9	3.9
Gypsum products	341.4	−0.9	−5.7
Hand tools	391.5	0.9	2.6
Hand tools, power driven	242.6	0.0	3.5
Industrial furnaces	403.1	0.8	1.9
Integrating and measuring instruments	238.7	0.1	1.8
Internal combustion engines	360.6	1.9	3.3
Lubricating oil	352.1	3.6	−7.5
Lumber millwork	321.6	0.3	3.1
Material handling equipment	298.4	0.2	1.0
Metal containers	360.0	−0.4	−0.5
Metal mill shapes (nonferrous)	298.7	0.0	−2.6
Metal tanks	297.9	−0.5	−2.6
Motors and generators	352.8	0.2	0.7
Motor trucks	320.1	−1.3	4.0
Office and store equipment	156.9	0.1	2.0
Paperboard	290.2	1.5	9.2
Paper boxes and shipping containers	281.8	0.9	5.9
Paper office supplies	243.8	0.4	2.8
Paint	281.4	0.0	1.0
Plastic resins	290.1	−0.6	−4.1
Precision measuring tools	268.3	−0.6	0.6
Pumps and compressors	364.3	−0.1	1.1
Refractories	371.7	0.1	0.1
Rubber belts and belting	336.7	0.0	−0.8
Scales and balances	233.8	0.3	1.2
Steel products	351.9	0.1	1.8
Switchgear	287.2	0.3	1.3
Textiles, synthetic fibers	149.0	0.1	−1.7
Textiles, gray fabrics	150.7	0.5	−0.3
Tires and tubes	232.0	−0.3	−1.8
Transformers and power regulators	236.5	0.0	0.9
Welding equipment	303.6	0.3	1.6
Wire and cable	204.8	−0.3	−0.9

Industrial prices

(Index 1967 = 100)



Source: Bureau of Labor Statistics

advances averaging at 0.2-0.3% a month, or about 2.5-3.5% at annual rate.

STEEL SCENE

Players slug it out in steel arena

Steel demand is beginning to pick up a bit, according to a majority of distributors responding to the latest Steel Service Center Institute (SSCI) survey. Nearly three out of five now see an increase in upcoming orders over the next three months—the largest such number in a year. And only 7% of survey respondents see declines

What's behind this slightly improved outlook? SSCI president, Andrew G. Sharkey, cites three key factors: 1) continuing strong auto production, 2) brisk first quarter public works construction due to an extremely mild winter, and 3) some new supply-related opportunities for service centers because of the recent USX strike.

Another factor mentioned by Sharkey is the relatively low level of inventories in the U.S. manufacturing system. This situation is tailor-made for service centers that can fill in the gaps almost immediately.

Moreover, distributors are not alone in projecting near-term gains. Thus 25% of buyers responding to the latest N.A.P.M. steel survey see increased purchases over the next three months.

The big question is whether or not this improvement will last. Sharkey isn't quite sure. He feels some slowdown could set in before too long in view of the modest outlook for big-ticket durables for the rest of 1987. Sharkey still looks for a small decline in overall SSCI member shipments for the year as a whole.

The SSCI survey also expresses some uncertainty about prices. While more than one out of three see some increases over the next six months, another 10% take the opposite view, saying that prices will soften slightly.

These differences of opinion are due to speculation about how USX production will affect the market in the next 3-6 months. While some feel an orderly reentry is likely, others still see another round of price cutting as mills slug it out for market share.

Several buyers point out that settlement of the USX work stoppage adds a 20% increase in supply potential. Products most affected include hot- and

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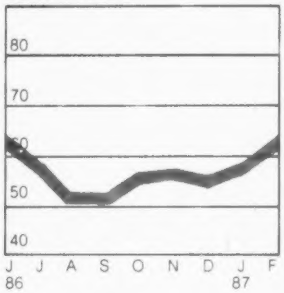
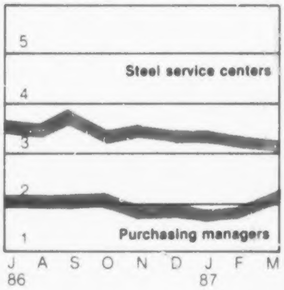
Steel

Operating rates

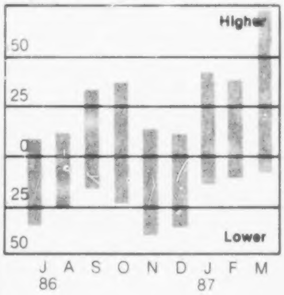


Inventories
(Months supply on hand)

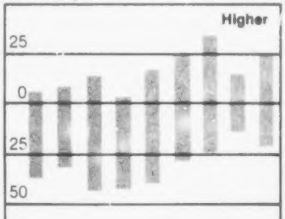


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



cold-rolled sheet, hot-dip and electrogalvanized steel, special quality and alloy hot-rolled bar, tin mill products, structural shapes, and steel plate.

Nor do those looking for price softness ignore the effect of imports. While admitting that the softer dollar and quotas have resulted in some price firming, they add that it's still not enough to put steel imports on a par with domestic products.

The figures from the latest surveys would certainly seem to confirm this. Specifically, 28% of service center buyers report carbon steel imports under U.S. levels—versus just 2% at higher levels. And in stainless, the 80% noting import bargains is quite impressive—especially the fact that 20% put the price break in the 11-20% range.

The new surveys also present some additional findings on inventories—namely that despite the fact that stocks are low, both service centers and buyers are still thinking of further reductions.

On the distributor front, for example, 39% believe their stocks are too high (vs. 12% who say they are too low). The comparable figures for buyers: too high (39%) vs. too low (4%).

One reason for the "keep 'em trim" approach—aside from demand uncertainties: the lack of major supply problems. True, cold rolled and coated sheets are worrying a few buyers, but even here, concern is way down from late 1986.

Import prices
(Compared to domestic)

Steel buyers

ABOVE	25%
SAME	36%
SLIGHTLY BELOW	39%
SUBSTANTIALLY BELOW	0%

Service centers (carbon)

ABOVE	2%
SAME	70%
5-10% BELOW	26%
10-20% BELOW	2%
OVER 20% BELOW	0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

PROCUREMENT STATUS

No problems—unless you want TiO_2

Chalk up another month of relative stability on the industrial procurement front.

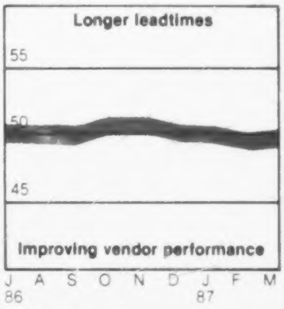
Products whose leadtimes have stretched out a bit are offset by others whose leadtimes have come in. So the overall averages remain unchanged. Further confirmation of overall steadiness comes from ***PurchasingWorld***'s exclusive leadtime index which is again squarely on the neutral 50 mark.

The N.A.P.M.'s speed-of-delivery survey also suggests little dramatic change. The number reporting slowdowns (9%) is offset by the number noting improvement (7%). Contrast this to the previous month when the gap was significantly larger (8% slowdown vs. 4% speedup).

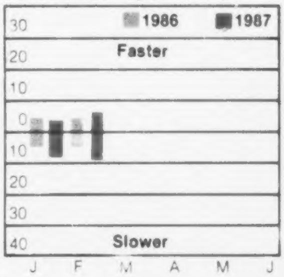
The only newsworthy trend is that industrial buyers finally seem to have ended their inventory

Monthly procurement status report

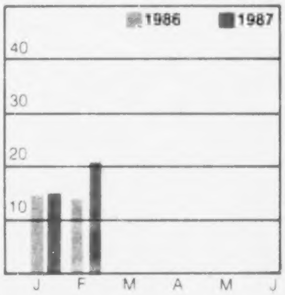
Leadtime index
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



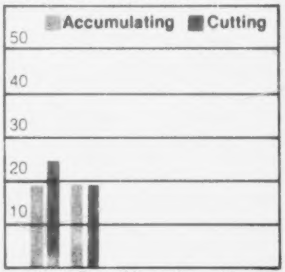
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

paring—at least temporarily. Over the past month, the 19% who reported cuts were equalled by another 19% who said they were accumulating. Contrast this to December 1986 when the 41% cutting overwhelmed the 12% who said they were adding.

PMs hasten to add that the change has very little to do with supply availability. They trace the shift to the fact that stocks can't go much lower—an appraisal that is confirmed by Uncle Sam's extremely low purchased materials stock/sales ratio.

But no one seems worried—17% of the purchasing executives surveyed continue to commit on a hand-to-mouth basis. This percentage has remained unchanged since last fall.

Perhaps the best indicator of today's problem-free climate comes from the fact that latest N.A.P.M. survey results show only one item in short supply—titanium dioxide. That's one less than last month when miscellaneous steel items were also on the snug list. Steel's disappearance from the list, of course, reflects the resumption of USX production.

There is nothing on the horizon to suggest any major problems. Even the threat of strikes is waning as unions remain on the defensive.

Leadtimes and availability

Chicago: C-r steel leads hold at 8 weeks—with plates and h-r bars at 4 and 6-7. Relatively stable are aluminum coil and sheet (12-14), aluminum bars and angles (6-8), batteries (10-14), capacitors (12-20), printed circuit boards (6-12), and semiconductors (16-20).

Cleveland: Slightly stretching out are steel canisters (to 2 weeks) and polyethylene resin (3). Remaining unchanged are PVC (2-3), paint (2-3), cold-finish aluminum (3), skids (1-3), and hardwood (2-3).

Los Angeles: These weekly delays are reported: galvanized steel (12-14), grey iron castings (4-5), brass castings (6-8), electro-mechanical devices (6-8), custom seals and gaskets (4-6), carbon steel coil (2), aluminum bar, sheet, and extrusions (2), and linear ICs (30).

Houston: Centrifugal compressors have moved out (to 10-13 months), as have boilers (5-11). Coming in (in months) are pumps (4-5), heavy wall reactors and converters (9-14), high pressure heat exchangers (4-7), cast steel valves (0-2), and structural steel (2-3).

Philadelphia: These weekly leads are reported: aluminum die castings (8-10), CMOS integrated circuits (on demand), large scale ICs and memory ICs (on demand to 8-10), and steel and bronze valves (5-6).

Pittsburgh: Reported weekly leads: multiwall bags (6), plastic bags (3-4), corrugated and folding boxes (3-4), drums (1), laminating papers (6-9), waterproof papers (8), plastic packaging materials (2-3), lumber (3-4), steel strapping (2-3), and paint (4-5).

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BUSINESS DATATRAK

Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	8	8	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	4	4	3½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	6½	6½	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	6½
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	11	17	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	4½	4½	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	14½
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	9	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

	Now	Month ago	Six months ago
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	1½
Plywood (Chgo)	3	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	½	½	½
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	3	2½	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	13	13	11
Brass Castings (LA)	7	7	9
Brass Rods (Chgo)	9	9	9
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	7	7	4
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6

	Now	Month ago	Six months ago
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	48	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	7	7
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	24	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	19	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	17	17
Welding Supplies (Hous)	5	5	5

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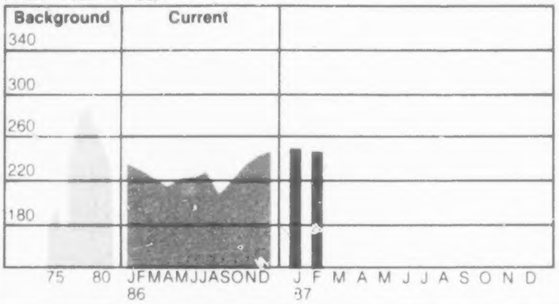
BUSINESS DATATRAK

Raw material price barometer

Latest month 247.2
Month before 252.8
Year ago 233.3

(Index 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt, merchant quality	15.70	23.95	23.95
Steel, bars, Pitts., cwt	15.70	23.95	23.95
Steel, bars, C.R., Pitts., cwt	19.45	31.00	31.00
Steel, plates, Pitts., cwt	18.25	18.25	18.25
Steel, plates, H.R., Pitts., cwt	18.25	18.25	18.25
Steel, sheets, C.R., Detroit, cwt	26.90	26.90	25.15
Steel, strip, C.R., Chi., cwt	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb (market place)	.625	.570	.590
Antimony, N.Y., dealer, lb	1.08	1.03	1.32
Beryllium-copper, cost ingot, lb	5.65	5.65	5.35
Brass, red, 85% [sheet], lb	1.31	1.29	1.32
Brass, yellow, [sheet], lb	1.26	1.24	1.27
Cadmium, N.Y., dealer, lb	0.95	0.95	1.15
Copper, electrolytic, wire bars, refd., lb	.67	.65	.68
Copper sheet, over 24 in., lb	1.40	1.38	1.41
Lead, common, N.Y., lb	.26	.26	.18
Magnesium, pig ingot, [99.8%], lb	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl	235.00	210.00	240.00
Molybdenum, oxide, dealer, lb	3.10	3.07	2.75
Nickel, cathode, dealer, lb	1.78	1.70	1.90
Platinum, dealer, oz	525.00	524.00	403.00
Silver, N.Y., oz	5.51	5.54	5.56
Tin, N.Y., dealer, lb	3.13	3.17	4.55
Zinc, Prime West, East St. Louis, lb	.38	.38	.34
Zinc, die casting alloy, No. 3, lb	.445	.465	.415
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.53	16.29	16.35
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	350.00	330.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd	.230	.238	.222
Cotton drill, 1.85, 59", 68x49, N.Y., yd	1.080	1.085	1.045
Cotton middling, 1", N.Y., lb	.540	.530	.620
Printcloth, 48", 80x80, N.Y., spot, yd	1.00	.95	.64
Army duck, 37", 13 oz., yd	1.405	1.405	1.480
Blended printcloth, 64", 78x54, yd	.83	.82	.73
20s combed yarns	1.77	1.77	2.05
Wool 64s, Staple, lb	2.12	2.00	2.00

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	80.00	80.00	N.A.
Benzene, petroleum, tanks, Houston, gal	1.58	1.20	.93
Caustic soda, 76% solid, drums, carlots, cwt	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb	.106	.106	.106
Glycerine, synthetic, tanks, lb	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb	.22	.22	.22
Phthalic anhydride, tanks, lb	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb	.285	.290	.320
Polypropylene, homopolymer grade (market price), lb	.350	.345	.360
Polystyrene, general purpose grade (market price), lb	.39	.39	.35
Polyvinyl chloride, pipe grade (market price), lb	.315	.305	.290
Soda ash, 58%, light carlots, cwt	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb	.33	.26	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt	152.50	152.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg. carlots, lb	.77	.77	.73
Xylene tanks, gal	.795	.765	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	327.30	322.90	305.20
Lumber 2x2 pine, mbf, cl	322.05	314.40	296.65
Plywood, plyform, ¾", msf, cl	566.45	585.05	566.55
Plywood, ¾", msf, cl	381.90	384.90	375.05
Cement, bulk, ton, tl	63.25	63.28	66.07
Sand, ton, cl	6.82	6.70	6.42
Ready-mix concrete, 3,000 psi/cu. yd, 15 cu. yd	48.15	48.07	48.21
Crushed stone, 1½", ton, cl	8.08	8.08	7.84
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.84	0.84	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	207.84	213.52	210.17
Brick, common, per thousand, tl	188.10	186.96	185.71
Asphalt paving, AC-20	124.66	124.05	172.31
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.37	7.36	7.07
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf, bbl	14.00	14.75	12.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl, reseller	17.50	20.75	19.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal	.520	.585	.455
Gasoline, 94 oct., reg., Chi., tank car, gal	.518	.510	.398
Heating oil, No. 2, Chi., bulk, gal	.483	.488	.440
Heating oil, No. 2, N.Y., bulk, gal	.450	.498	.605
Heavy fuel, PS 400, Los Angeles, rack, bbl	26.50	26.50	26.50
Jet kerosene, gal	.475	.478	.468
LP-Gas, propane, Okla., tank cars, gal [incl. discount]	.245	.245	.330
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	80.00	83.00	74.00
Steel, No. 1 hvy., dlvd., Chi., ton	73.00	77.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb	.580	.555	.605
Copper, No. 2, East, wholesale buy, dlvd., lb	.500	.480	.525
Brass, red, East, wholesale buy, dlvd., lb	.540	.515	.565
Brass, yellow, East, wholesale buy, dlvd., lb	.330	.330	.300
Alum., old sheet/cast, E., wholesale buy, dlvd., lb	.385	.355	.375
Alum., mixed clip., E., wholesale buy, dlvd., lb	.420	.380	.400
Zinc, old, East, wholesale buy, dlvd., lb	.200	.200	.150
Lead, clean solids, East, wholesale buy, dlvd., lb	.155	.155	.100
Paper, No. 1 mixed, dlr., N.Y., ton	Nom	Nom	Nom
Paper, old corrug. box, dlr., Chi., ton	25.00	28.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	15.00	22.00	10.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb	.120	.090	.110
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb	.120	.110	.130

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Office Products

Office market is fair game for bargain hunters

Robert S. Reichard, executive editor

If you can't cut a deal in office equipment and supplies today, then you really aren't trying. In most cases there's more than enough equipment and sources to go around, and vendors are scrambling to get a piece of the action. And while some marginal increase in transaction price averages is possible, weakness again should prevail in some of the more hotly competitive high-tech sectors.

This scenario is painted by the majority of purchasing managers responding to a new ***Purchasing World*** nationwide buying survey. These respondents feel that this will be taking place at a time of rising demand—especially in computers, telecommunications, and office copiers.

Nor are buyers alone in this latter demand assessment. Industry leaders are telling the same story. The Computer and Business Equipment Manufacturers Association (CBEMA) is projecting shipment gains in almost all key areas—not only for 1987 but for the next few years as well.

But buyers will still have their share of headaches. Rapidly changing technology in high-tech areas will continue to make many purchasing decisions difficult. Buyers must also work to avoid obsolescence while also aiming for standardization of equipment and supplies. Prices will also vary—some fair-sized increases are possible in the office supplies and office furniture areas.

By and large, survey respondents are confident that they can live with these pressures. Here's how they see the basic 1987 procurement picture shaping up:

■ **1987 demand trends:** Modest gains are suggested by the fact that an impressive 48% of the responding buyers anticipate an increase in purchases. That should be enough to push 1987 totals into the plus column—only 33% see declines and the remaining 19% expect little change.

Biggest dollar outlays are being earmarked for computers—with telecommunications equipment and copiers following close behind. One big computer buyer who has carefully studied this market estimates that industry-wide personal computer sales could jump as much as 25% this year.

On the other hand, increases in purchases of office supplies are expected to be just slightly above the general economic growth rate. This is confirmed by a recent Commerce Department study which suggests that overall business forms demand will increase only about 4-5% this year.

■ **1987 price trends:** The average advance should be only about 1%—not much different from last year when a fractional decline was indicated. And not everyone will be affected. Thus 22% of the respondents feel that they can still do better than last year by pressing for bigger price cuts or by settling for smaller price boosts.

Another 41% of the buyers surveyed see very little change in 1987 price patterns. Add these to the 22% expecting to improve on 1986's performance, and it suggests that two out of every three PMs should do as well, if not better, than last year.

- **A closer look at 1987 prices:** As indicated earlier, there could be wide variation depending on the product. Generally speaking, the more high-tech the product line, the greater the likelihood of price declines (see accompanying chart). Four out of five respondents now anticipate declines in personal computer quotes this year. Equally impressive figures are posted for PC software (59%), printers (50%), other computer peripherals (46%), and electronic typewriters (52%).

Copiers, too, are expected to exhibit some price softness. Specifically, the 30% anticipating lower tags offsets the 12% who are bracing for increases. The remaining 58% see little overall change. The outlook for telecommunications equipment prices isn't bad either. Those who expect boosts almost completely offset those hoping for more declines.

Prices of more traditional items are expected to rise a bit. In the office furniture sector, for example, the 52% who are reconciled to increases overwhelms the small 12% who are looking for 1987 declines. Similarly, 36% of the queried buyers anticipate price hikes in office supplies--double the 16% who are still hoping for decreases.

- **The role of purchasing:** Most buyers report that they are playing an increasingly important role in the procurement of sophisticated equipment. Some 70% say they are now part of a selection team and another 15% say they are the primary decisionmakers.

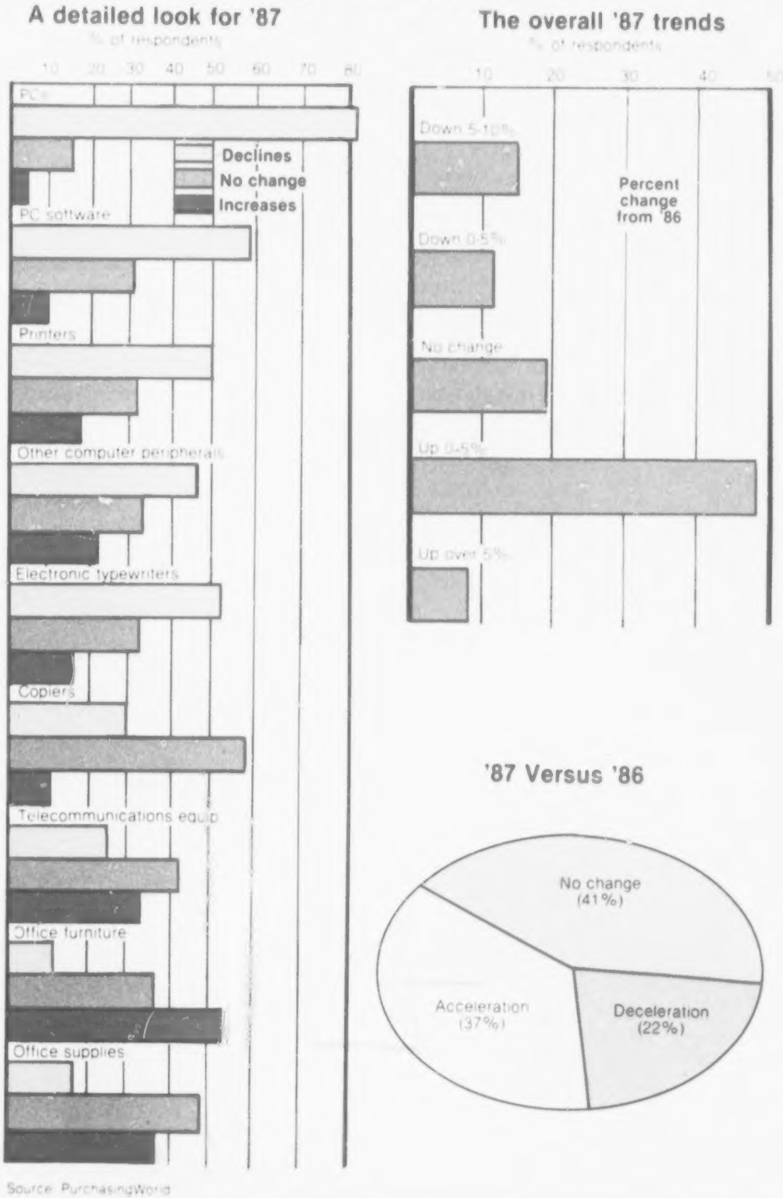
The increasing role of the purchasing professional makes good sense. Rapidly changing technology and the bewildering number of systems on the market make it almost mandatory that procurement of computers and other advanced electronic equipment be thoroughly researched and coordinated. In the words of one survey respondent, "What better place for this than the purchasing department?"

Those involved in buying office supplies and equipment must also develop strategies for 1) servicing of equipment, 2) making sure that purchased equipment is meeting a company's needs and lives up to manufacturer's claims, 3) gauging the lag between new hardware and software, and 4) deciding whether to handle data processing in or out of house. Office buyers must also track pricing and market trends constantly. One buyer who checks computer prices weekly says, "You never know what you are going to pay for the same PC from week to week or vendor to vendor."

Shoddy workmanship is another complaint voiced by a few respon-

Office Equipment & Supplies

A buyer's view of prices



Source: PurchasingWorld

dents. Their claim is that products are being made of cheaper materials in order to keep costs down. This, in turn, has raised concern over servicing. A PM for a large Southern bank keeps a log on all equipment which includes all service calls, service contract expiration dates, warranties, etc. He then reviews the log to decide which equipment to buy, which to keep under service contract, etc.

Purchasing pros are relying on some tried and true techniques such as value analysis, competitive bidding, and multi-vendor interviews. One buyer offers these simple steps when making a big ticket office buy:

- Don't rush the buy. Keep the ultimate user involved all the way.
- Use requests for information to get all the facts.
- Schedule vendor presentations to supplement information.
- Narrow alternative solutions.
- Make the final decision, using generic performance specifications.
- Observe the equipment working somewhere else before you buy.
- Check all vendor references.

Office equipment demand reaches new heights

Business equipment manufacturers are setting their 1987 sights high—looking for demand gains in virtually every single key segment of the industry except mainframe computers.

Their thinking, reflected in forecasts by the Computer and Business Equipment Manufacturers Association (CBEMA), suggests that total dollar sales (computers, other business equipment, software, and services) will hit a peak $377 billion this year.

Many of the new projections which are given in unit as well as dollar terms (see chart) also suggest relatively soft prices. Divide unit projections into dollar amounts and declines in average 1987 purchase prices are indicated for microcomputers, general display terminals, printers, electronic calculators, copiers, and electronic typewriters.

There are some small unit price increases implied for mainframe computers and facsimile machines. But this is probably due to the upgrading of product mix.

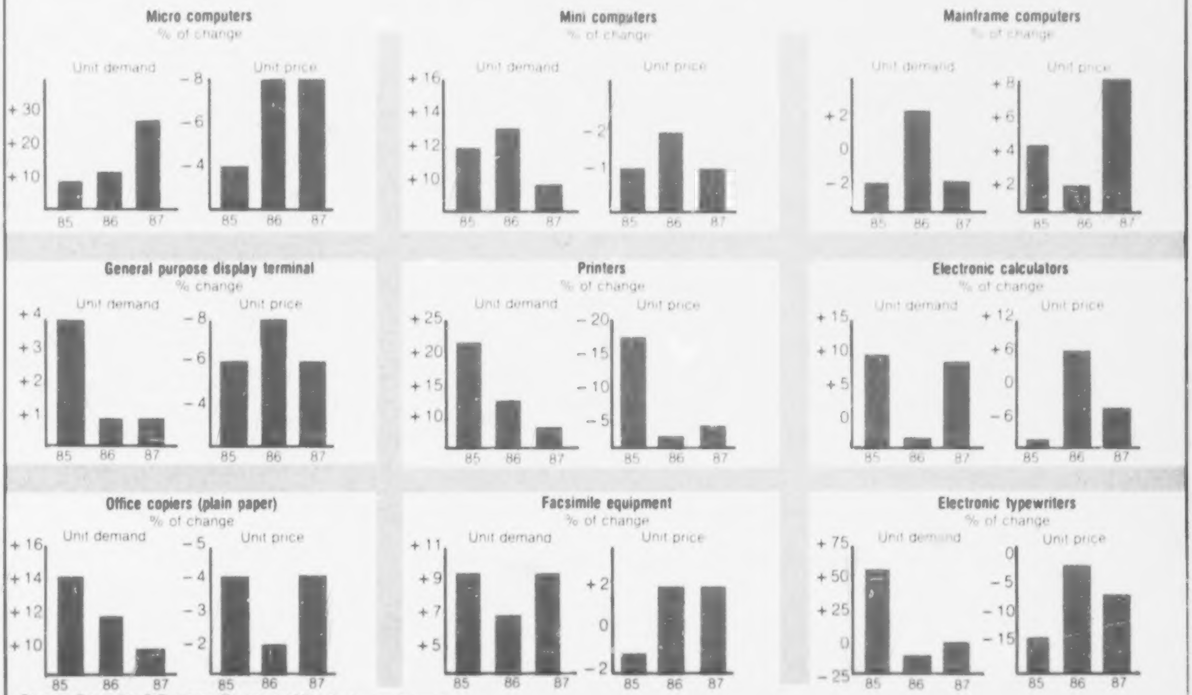
CBEMA's estimates for 1990 paint much the same picture. Gains are anticipated in all sectors except mainframe computers and electronic typewriters. The fall-off in the latter area is attributed to the gradual replacement of these machines with PCs.

The falling price trends noted for 1987 are also expected to continue over this longer time span. By 1990, for example, the average business personal computer should be selling for only $2,242.

Other impressive unit price declines over this 3-year period are projected for general purpose display terminals (-21%), electronic typewriters (-23%), copiers (-11%), and electronic calculators (-8%).

1987 office equipment trends

A vendor perspective



Source Computer & Business Equipment Manufacturers Association

Gear up for accelerating inflation

A slight increase in the overall inflation rate is projected by analysts at Data Resources Inc. (DRI), a Cambridge, MA consulting firm. They expect a 1.6% boost in industrial commodity tags this year vs. a 3.7% drop last year. Further acceleration to 4.4% and 3.8% is anticipated for 1988 and 1989.

Similar acceleration is seen for other key price measures. The GNP implicit deflater is expected to hold at an increase of 2.7% for 1987. But by next year and 1989, the increases are projected to accelerate to 3.4% and 3.8%.

A look at individual product price trends (provided every three months by DRI for *PurchasingWorld*) tells the same story. Increases over the next 12 months will be a bit stiffer than those suggested just three months earlier.

Factors cited for the steeper rates of gain include higher oil quotes, the weaker dollar, and slightly larger boosts in wage rates. On the latter score, DRI sees the employment cost index for private industry wages and salaries moving up 3.9% this year vs. 3.6% in 1986—and higher rates of 4.0% and 4.5% are expected in 1988 and 1989.

All these factors suggest the following product-by-product price patterns over the next few years:

- **Energy:** Warmer spring weather and higher non-OPEC output, combined with inventory drawdowns, will push oil tags slightly lower this quarter. But by midyear, markets should become firmer and first quarter 1988 crude oil should hit $17/barrel. And the advance will continue to over $19/barrel by the end of 1989.
- **Chemicals:** A rebound in feedstock costs and a healthy end-market demand pattern will lead to higher price boosts. Industrial chemicals, which fell 4.7% in 1986, will move up 1.2% in 1987, 5.1% in 1988, and 2.8% in 1989.

Prices: A 2-year look ahead
(comparison of 2nd quarter pricing)

Product	Percent changed 88/87	89/88
Raw materials, energy		
Gasoline	12.5	4.2
Industrial chemicals	4.4	2.5
Intermediate materials, less food	4.0	3.9
Metals		
Steel mill products	4.3	4.4
Carbon steel plates	4.0	4.8
Steel, hv. structural shapes	5.9	3.7
Primary aluminum, ex billet	4.0	5.1
Domestic copper cathode	2.2	5.4
Secondary nonferrous metals	3.2	4.7
Lead, pig, common	2.6	3.3
Aluminum shapes	5.3	5.5
Components		
Truck tires	3.0	2.7
Laminated plastic sheets	3.4	3.5
Corrugated containers	4.3	3.7
Foundry & forge shop products	6.1	3.8
Hardware	4.2	3.6
Electronic components	4.2	6.5
Machine shop products	3.7	5.6
Construction products		
Prepared paint	3.6	3.3
Wiring devices	4.8	5.1
Flat glass	4.1	3.3
Machinery		
Construction equipment	4.9	5.5
General purpose machinery	3.8	4.1
Durable manufacturing	3.9	4.3
Trucks over 10,000 lb.	4.9	5.1

Source: Data Resources, Inc.
Cost Forecasting Services

- **Nonferrous metals:** Import pressure will hold down price boosts. The aggregate producer price index for primary nonprecious nonferrous metal will rise only 0.7% per quarter this year, 1.2% per quarter in 1988, and 1.0% per quarter in 1989. But by late 1989, prices will be running about 13% ahead of late 1986 levels.
- **Steel:** Prices are expected to soften over the next few months as USX production hits the market again and poor demand conditions persist. But next year, as the economy enjoys strong, export-led growth and producer costs rise, more substantial boosts are expected. DRI's forecasts for mill products: +1.6% in 1987, +4.3% in 1988, and +4.5% in 1989.
- **Construction materials:** Boosts in fabricated structural metal tags will remain small—2.4%, 2.9%, and 3.6% for 1987, 1988, and 1989 respectively. But oil-based items will move up much faster. Example: Bituminous paving materials, after falling 5.9% this year, could advance 4.2% in 1988 and 7.3% in 1989.
- **Machinery and equipment:** Some acceleration is expected next year as demand begins to improve. DRI forecasts the following increases in metal-forming machine tool prices: 3.0% in 1987, 5.5% in 1988, and 5.7% in 1989. The aggregate machinery and equipment index, which rose only 1.5% in 1986, is forecasted to move up 2.1% in 1987, 4.2% in 1988, and 4.8% in 1989.
- **Electronic components:** A stronger market is seen as 1) personal computer sales rise, 2) Japanese competitors are forced to raise prices in the wake of recent trade agreements, and 3) chip inventories are drawn down. DRI forecasts an average annual increase of 3.8% over the 1987-89 period.

DRI is also making some long-term price projections (through 2000). Some of the average annual rates of increase anticipated over this period: nonferrous metals (+5.7%), steel (+5.2%), steel-based construction materials (+4.7%), oil-based construction materials (+9.4%), and machinery and equipment (+5.6%). **PW**

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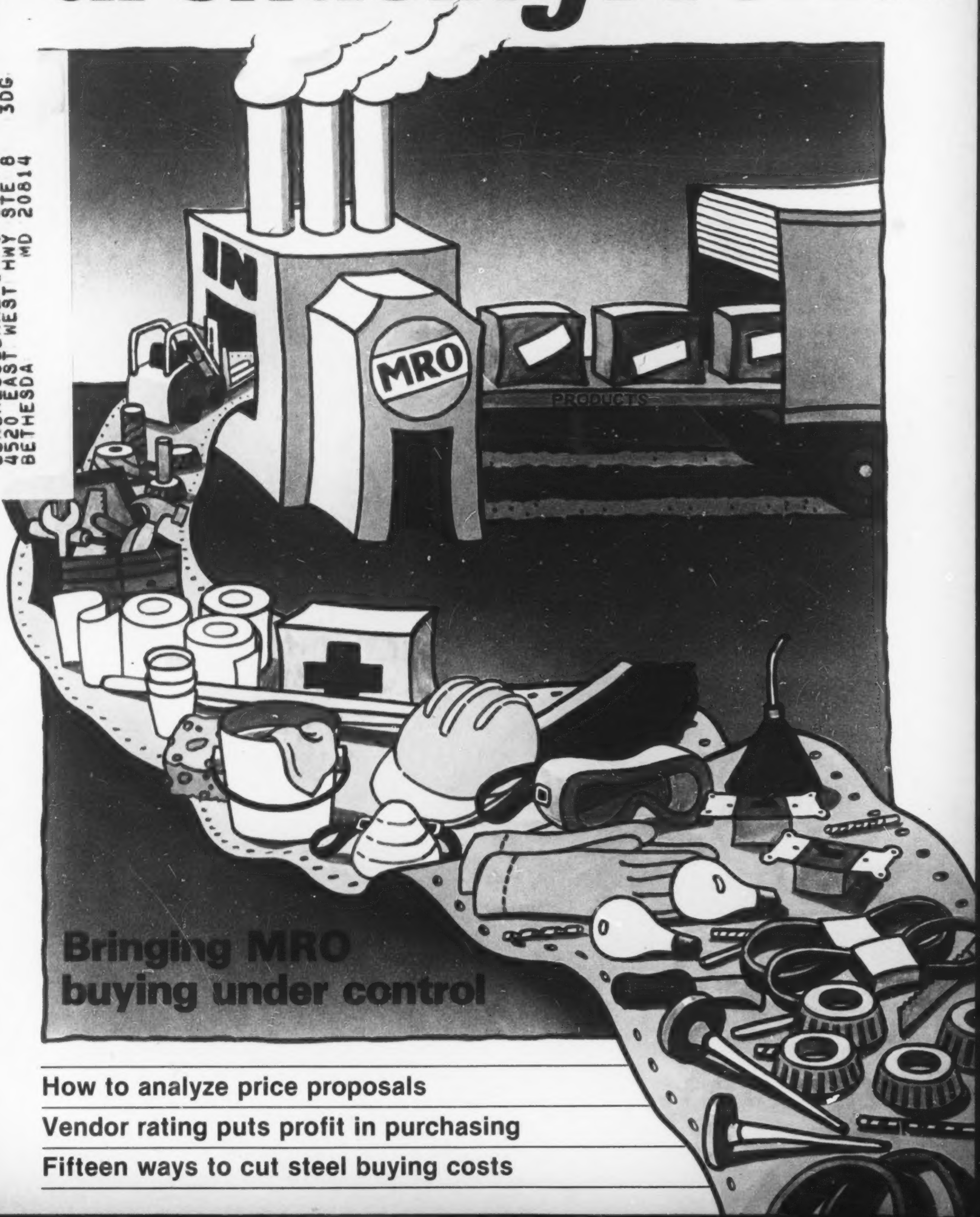

Bringing MRO buying under control

How to analyze price proposals

Vendor rating puts profit in purchasing

Fifteen ways to cut steel buying costs

PurchasingWorld
May 1987 Vol. 31 No. 5

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PW PREDICTS

Robert S. Reichard, executive editor

PMs can live with inflation surge

Prices may be moving up more briskly these days—but nobody seems worried about a big inflationary surge.

Wharton Econometrics predicts that industrial price averages over the 12-month period ending 4Q 1987 will rise by 4.4%. *PurchasingWorld* readers are even more optimistic—they see only a 3.1% increase this year. Not a single respondent to our survey anticipates an advance over 6%. This is in contrast to last year when many purchasing executives experienced lower prices in many product areas. But our readers' new 3% + overall inflation estimate is one that most say they can live with.

They also say that the upward price trend comes as no surprise—they gave similar estimates about 1987 at the beginning of the year.

But nobody is pushing the panic button because 1) competition remains keen, 2) there's ample capacity, 3) wage costs are still relatively restrained, and 4) money costs are expected to stay near current levels.

Not even our #1 inflation fighter, Paul A. Volcker of the Fed, seems overly disturbed. His feeling: Greater inflation this year can be overlooked if it's a temporary development due only to higher prices of oil and goods imported from countries whose currencies have strengthened against the dollar. Expressed another way, while external factors on prices (oil and the dollar) are making themselves felt, the underlying rate of inflation remains under control.

What, then, is this underlying rate of inflation? Most economists today put it in the 3-4% range—where unit labor costs are settling this year. This will have considerable impact.

Nor does the supply-demand side of the equation indicate a dramatic change in prices. Domestic industry operating rates remain (and will probably hold) in the 80% range because industrial production should rise only 2.5-3% this year.

There are a few industries where operating rates are relatively high—notably paper and plastic resin. But these are exceptions. The overall operating rate would have to approach the 85% level for any serious demand-pull inflation to develop—and that's just not in the cards.

This picture of oversupply is the same globally. Free World growth—in the sluggish 2.2% range—is hardly enough to offset hefty global capacity excesses in such industries as autos, steel, computers, semiconductors, heavy equipment, and textiles.

This excess should make foreign producers more hesitant to raise prices to U.S. customers every time the dollar weakens. Wherever possible, they'll continue to absorb at least part of the currency impact. In any event, the "exchange rate" effect probably won't boost the overall U.S. price level by more than 1% in 1987.

PM salaries

Purchasing managers haven't been doing badly in the salary sweepstakes. A new Administrative Management Society (AMS) survey suggests a 3.4% overall increase over the past year. This compares to boosts received by other middle managers. And this increase is accompanied by only a 1.9% advance in the cost-of-living index. Implication: Buyers' real incomes went up about 1.5% on average in 1986.

But this could be deceptive because there were considerable differentials about this average—depending on the type of industry and region involved (see chart).

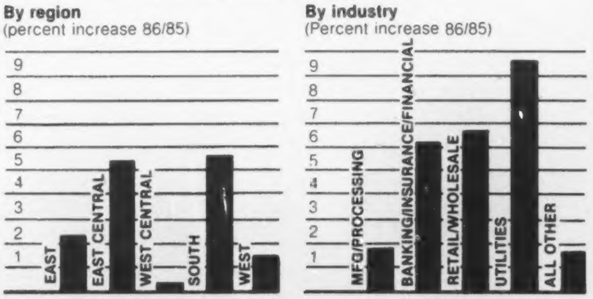
On a geographical basis, PMs working in the South and East Central regions of the country tended to fare best--receiving annual increases of 5.7% and 5.5%, respectively. On the other hand, those working in the West Central and Western parts of the nation experienced only 0.3% and 1.4% boosts, respectively.

Variations, when viewed from an industry perspective, are even more pronounced—ranging from a 9.6% boost for PMs in the utility area to only 1.9% for manufacturing/processing.

Not only did utilities fare best in percentage gains, but they are also managing to pull down the highest purchasing salaries ($46,900 on average). In contrast, banking/insurance/financial PMs receive only $31,300 and manufacturing/processing PMs $38,300. The all-industry, all-area average PM salary is $36,900—$1,600 per year above the all-middle manager reading ($35,300).

Purchasing managers lagged behind plant managers and sales managers whose salaries averaged $46,200 and $43,200, respectively. On the other hand, buyers did considerably better than middle managers in fields such as warehousing, administrative services, cost accounting, employment, and customer services.

How PM salary increases vary



Source: Administrative Management Society

PW PREDICTS

Paper

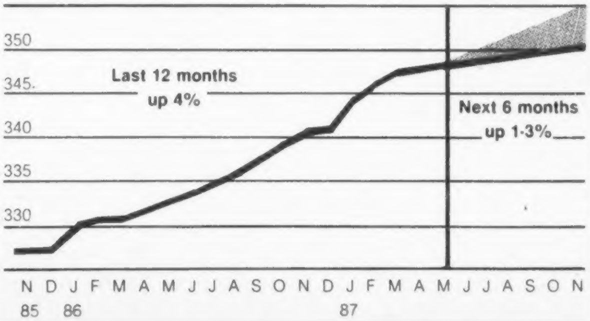
CURRENT SITUATION: This industry is off to a fast start for 1987. Demand is up and most prices have advanced due to operating rates in the 90s. Linerboard should hit $380/ton and pull up corrugated tags with it. Southern and Northern bleached softwood pulp are near $560/ton and $585/ton, respectively. Newsprint will hit $600/ton by midyear. **Coated paper and uncoated free sheet are exceptions.**

DEMAND: Look for another year of solid growth as exports combine with increased domestic gains. Low inventories are also a positive factor in the overall demand outlook for 1987. **Total paper and paperboard production should top 73.1 million tons, reflecting a 2.7% jump in domestic consumption and a 7-8% increase in exports.** Most grades will post production gains: kraft linerboard and corrugated (3%), uncoated groundwood (2%), uncoated free sheet (4%), and coated papers (3.5%).

SUPPLY: Snug markets are projected as most types of paper and board continue to operate in the 90%+ range. The exception is in coated: a 9%+ increase in potential will push operating rates down from 92% in 1986 to 87% in 1987. **Overall paper and board capacity will rise only 2.3%—a bit under the 3% output gain.** No shift from this market balance is projected for 1988 or 1989 where preliminary capacity gains will be 1.8% and 1.3%. But these figures may be conservative as new firms add to overall plant and equipment plans.

PRICE OUTLOOK: Advances should continue but they'll be more subdued than over the past six months. Two exceptions: 1) corrugated, where converters will move to bring tags in line with higher linerboard quotes, and 2) coated, where overcapacity should continue to cause shaky markets. Lingering softness is also possible in uncoated free sheet.

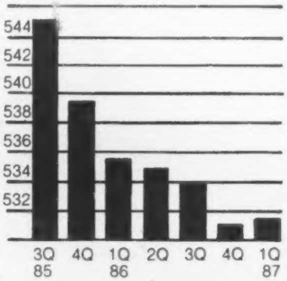
Paper & product prices
(Index 1967 = 100)



Computers

In a move to make room for the newly introduced PCs, IBM is cutting tags on some of its older models by as much as 35%. This move may force rivals to follow suit if they want to continue their strategy of undercutting IBM quotes. In other news, one firm is dropping its workstation prices 36% to $5,000 in a move to halt possible capture of this market by the new, more powerful PCs. The cut, adds a company spokesman, makes these workstations (used by printers and engineers) less costly than comparably equipped PCs.

Bituminous coal
(Index: 1967 = 100)



Coal

Figure on another small overall price decline for 1987. Right now the betting is that average quotes (FOB mine) could fall to $24.30/ton—about 30¢/ton under last year. Also worth noting: Spot markets now run 15% under contract levels. Credit softness to a combination of overcapacity and competitive pressures from other energy sources. But despite low quotes, demand gains will be modest—with totals rising only 1% (to 904 million tons) this year. One reason: A drop-off in both exports and metallurgical coal use.

Zinc

Labor uncertainties have been keeping market prices relatively firm—the metal is moving in the 37-38¢/lb range. But there's plenty to go around (inventories at latest report were up 12% over the previous month—reaching 24,735 tons). Lackluster consumption is likely to keep a lid on prices, as reduced auto demand offsets increased per car use of galvanized steel. In any case, it's hard to see overall 1987 slab metal use rising much above last year's estimated 975,000 ton level. The long-term trend is hardly bullish either—with little significant change in consumption noted now for three years running.

High-density polyethylene

Producers are trying to reverse recent softness—and have just posted a 3¢/lb increase. The aim is to bring quotes up from recently depressed levels (27-29¢/lb for the injection molding grade and 28-30¢/lb for the blow molding grade). But chances of the entire boost sticking are rated only 50-50—despite high 95% operating rates and continuing good demand. One buyer reports his entire requirements through June are covered at the

Steel

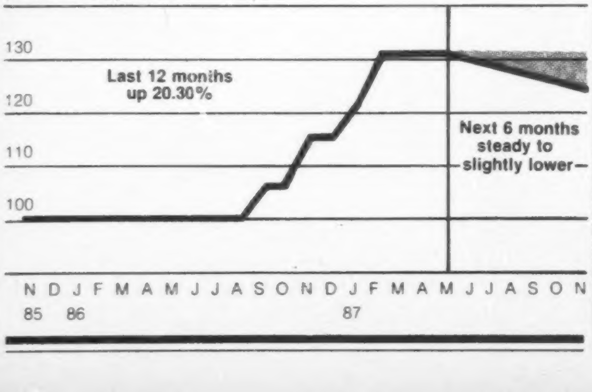
CURRENT SITUATION: Prices have been holding up well—despite USX strike settlement. Reason: Good demand (mills are booking sheet orders for June and July delivery)—with a 17% share of domestic shipments before the strike, the firm has been moving back into production slowly—averting a price war. Prices have been moving the other way—mills are asking for a $15/ton boost in sheet steel be June 1. **If successful, this would bring the average cold-rolled quote to around $455/ton.**

DEMAND: Some near-term seasonal slowdown is anticipated. For the year, about a 65-66 million ton shipment total—vs. 70 million of 1986. Reason: **Reduced consumption by construction and transportation.** About 10.5 million cars are likely to be sold this year (vs. 11.6 million in 1986)—with truck sales dropping from 4.92 million units in 1986 to 4.6 million in 1987. Construction softness will reflect weakness in multifamily housing units and commercial and office building activity.

SUPPLY: There's still too much capacity—the AISI utilization yardstick holds in the low 70% range. The industry is rationalizing potential. Raw steel capability is expected to drop to 112 million tons by yearend. That is still enough to support shipments of 80 million tons/year. **And imports are expected to come in at a relatively brisk 1.6 million ton pace**—accounting for 20% of total needs.

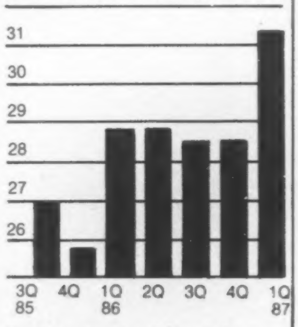
PRICE OUTLOOK: Market tags should stabilize or soften by summer or fall—despite recently announced increases By then, USX should be in full production. 1987 is not going to be a banner consumption year. And prices will creep up again as costs rise and capacity rationalization continues. **For 1988: A 4% advance in overall mill products.**

Steel prices
Cold-rolled sheet
(Index = 4th quarter '85 = 100)



low prices of the first quarter. Still others cite aggressive selling by two producers. Best bet: a 1-2¢/lb advance—with perhaps a similar increase for the upcoming third quarter.

Polyvinyl chloride
(transaction price—pipe grade ¢/lb.)



Polyvinyl chloride

Prices continue to move up. Pipe grade material now commands as much as 33¢/lb (vs. only 28¢/lb last October). Nor is that the end of the line, with tags expected to move up another 1-2¢ by midyear. Behind that advance: Tight supplies, good demand, and rising costs. On the supply side, producer inventories are at their lowest point in two years despite all-out production. And on the cost front, chlorine tags have jumped by close to 10% in recent months. Demand is also moving up. A 3% gain is seen for 1987, all on top of last year's big 10% jump.

Copper

The late winter rally has run out of steam—with the red metal still unable to break through the 70¢/lb barrier. One of the problems: Just so-so demand as several markets—notably autos, construction, and machinery—struggle to reach last year's levels. Domestic consumption could actually show a fractional decline from last year's estimated 2.03 million ton total. As such, even with relatively low inventories, prices for the year are not likely to average much above last year's 66¢/lb. One thing for sure, any sustained rise over 70¢/lb is highly unlikely—for it would quickly bring a lot of currently idled capacity back on stream—with a resulting weakening of prices.

Trucking rates

It looks like another good year—with shippers being hit with only fractional rate increases. At least that's how analysts at Standard & Poor's see it. Their basic prediction for Class I motor carriers: a 1% increase in TL shipment rates—with LTL tags moving up at only a slightly faster 2% rate. That would be a repeat of last year's pattern and well under the previous year (1985) when TL and LTL shipment rates advanced 4.6% and 2.8%.

Air freight

More rate reductions could be coming as competition heats up. Sign of the times: Federal Express rate reduction to fend off inroads by United Parcel Service and other carriers. A spot check of the industry confirms the softness, with widespread reports of overcapacity, discounting, and increasing pressures from customers for both better service and lower rates. One likely result: A series of mergers, buyouts, and bankruptcies over the next few years. Nevertheless, volume should grow—with an increasing emphasis on lighter, more time-sensitive products which can benefit from air cargo service.

Nickel

(Dealer cathode $/lb.)

1985	3Q	2.25		3Q	1.82
	4Q	1.91		4Q	1.74
1986	1Q	1.88	1987	1Q	1.74
	2Q	1.92			

Nickel

Competition continues to put downward pressure on prices—with plating grade metal fetching only $1.80/lb in recent weeks on dealer markets. Current softness, aside from lackluster demand and oversupply, may stem from Russian sales to Europe. Sold through the LME at relatively low prices, it's forcing all producers to keep tags low if they want to move their metal. In other news of interest to buyers, Falconbridge is testing (in Europe) a new electrolytic metal aimed at the continuous charging and foundry market.

Aluminum

Markets remain buoyant. Recent price boosts, for example, have been posted on unalloyed ingot, extrusion billet, and a host of flat-rolled products. But the question is how much longer the upward trend will continue. Some big users are now indicating they may hold off on new orders in the hope of some market softness by fall. Certainly consumption estimates would seem to suggest some easiness. On a Free World basis, totals should do little more than equal 1986 levels. Superimpose this on expectations of as much as a 5% production rise, and some inventory buildup may be in the making—with ingot again tending to fall back toward the 60¢/lb level.

Chemicals

First quarter firming is expected to spill over into the second and third quarters—especially for key big-volume chemicals and plastic resins. Reasons: improving demand, higher operating rates, and rising feedstock costs. On the latter score, prices have recently moved up sharply for naphtha, ethane, propane, benzene, and toluene. Similarly, monomer tags are up for ethylene, propylene, styrene, and vinyl chloride. More increases, though somewhat more subdued, lie ahead—with both overall industrial chemicals and plastic resins moving up about 3-4% at annual rate over the next six months.

Electronics

Electronics markets may firm this year, according to analysts at Henderson Ventures. The California-based consulting firm sees semiconductor sales rising by 20% in current dollars vs. the 5% gain in 1986. Next year's increase is forecasted to be 22%.

The less volatile passive components sector will also see some demand acceleration. Increases for 1987 and 1988 are expected to be 11.8% and 13.9% vs. a small 3% gain in 1986.

Much of the demand optimism in semiconductors is due to the ending of last year's inventory drawdown. By the end of 1986, electronic equipment manufacturers had exhausted their excess inventory. So OEMs will no longer have this source of supplies to use for their production requirements. And because purchases in 1986 were way below production needs, there will be a catch-up factor in 1987.

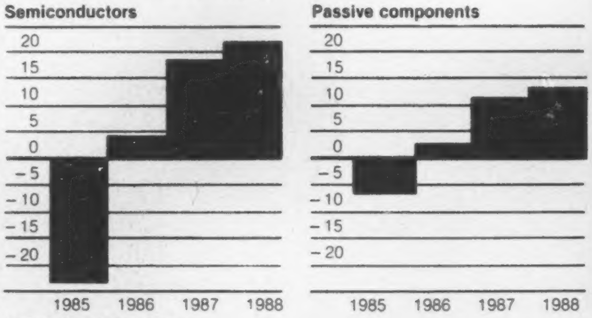
Thus a 20% increase in 1987 semiconductor purchases is predicted at a time when production of electronic equipment is expected to grow by only 9.5%. Commercial sectors should fare best, rising 11.6% this year vs. last year's 3% decline. But military electronics will decelerate from a 9.0% growth rate in 1986 to only 4.4% in 1987.

In the commercial sector, the most rapid growth will be in the computer and office area where a 13.6% gain is projected—a major turnaround from the 10% decline in 1986. Storage devices and CPUs will be especially strong.

Industrial equipment and instruments, aided by firming exports, will also do well in the commercial sector—with an 11.1% growth rate vs. the 2.7% advance in 1986. Communications equipment will be the slowest growing commercial area (because of a slowdown in on-site customer equipment), but there should be enough upward pressure to cause an 8.6% overall increase this year—well above the 4.2% gain in 1986.

Electronic component demand trends

(Percent change in current dollars)

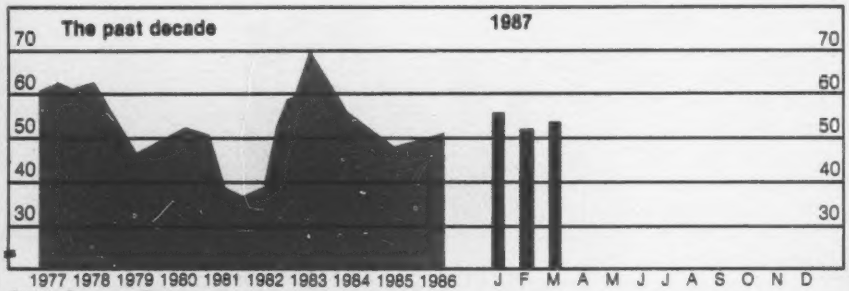


Source: Henderson Ventures

BUSINESS DATATRAK

N.A.P.M. business barometer

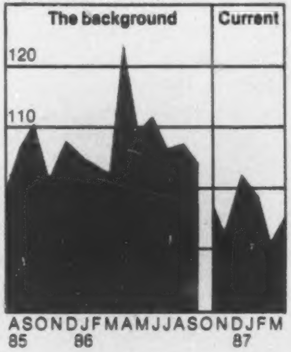
Based on five indicators (employment, inventories, new orders, production, vendor performance)



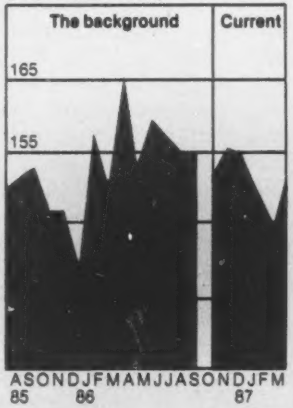
Source: Commerce Dept.

Leading indicators

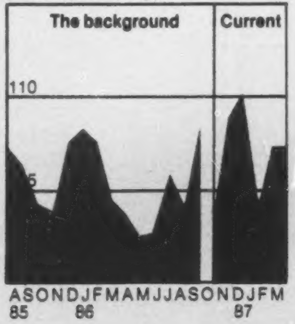
1. Consumer buying plans
(Index: 1985 = 100)



2. Contract awards
(Index: 1982 = 100)



3. Durable goods orders
(Bil. of $, seas. adj.)



KEY ECONOMIC TRENDS

Upward, still, but gradually

Don't expect the current lackluster—though still upward—business pattern to change any time soon.

The basic problem: consumers are taking a breather after last year's big buying splurge when consumption outlays jumped a hefty 4.1% in real terms.

Some of the other sectors are showing signs of perking up. Capital spending prospects are looking a bit better now that tax uncertainties are over and operating rates are beginning to edge up. The weaker dollar—by shifting more orders to domestic firms—can't be ignored either.

These alone can't really put the economy back on a fast track. This can probably best be appreciated by looking at the N.A.P.M. business barometer (see chart). It remains just barely in the positive (over 50) range—hardly a harbinger of any major spurt.

A look at family buying plans, meantime, points up the problems in the consumer area. Note from the chart that totals are actually under the highs of last year. In the key auto area, only 3.9% contemplate the purchase of a new vehicle any time soon—far under the 5% and higher rates of last year.

Major appliances—showing a level pattern *vis a vis* 1986—are a bit more encouraging. That's still not the same as a gain—so appliances have to be regarded as little more than a neutral factor.

On a rosier note, consumers—contrary to conventional belief—are really not that overextended. The debt/income ratio is high, but some of this reflects the growth in temporary card credit. Also, it doesn't take into consideration the facts that 1) maturities have lengthened, thus holding down monthly payments, and 2) there are more young adults around, people who tend to borrow more than average amounts.

This latter demographic shift could be one reason why housing starts continue at above a 1.7 million annual rate—not that much under last year's peak 1.82 million total. Keep in mind, though, that a level pattern is not a rising pattern; no contribution to GNP here.

Construction awards, including other types of building activity besides housing, actually lag that of a year ago.

A third chart, on durable factory orders, tells much the same story. This bellwether of near-term industrial production continues to zigzag—again without any discernible positive movement.

Nevertheless, some overall gains in both output and GNP still seem likely. Consumers (bolstered by a small disposable income gain) are likely to spend a bit more in areas other than housing, appliances, and cars.

A shift in inventory trends seems to be in the making. While nobody is about to go on a buying binge, some additions will be needed this year following last year's big stockparing drive. Current projections call for about a $14.5 billion increase in real holdings (GNP basis)—about $8 billion more than in 1986. This has to have positive impact.

All this, combined with industrial production increasing at a 2% annual rate through summer, and some possible acceleration, will give us a 3-4% pace toward year's end.

Midwest drives fleet costs down

National averages can be a bit misleading when estimating fleet car operating and ownership costs. A new Hertz study suggests a 32% differential among 20 major American cities. That's 16.7¢/mile.

Los Angeles, San Francisco, and New York are the most expensive locations and have been for seven years (see chart). It costs about 60¢/mile to drive a new compact (held five years and driven 10,000 miles per year) in each of these cities.

At the other end of the spectrum are many Midwestern cities (including Milwaukee, Cincinnati, Cleveland, Pittsburgh, and Minneapolis) where costs average under 50¢/mile vs. the 20-city average for compacts of 52.5¢/mile.

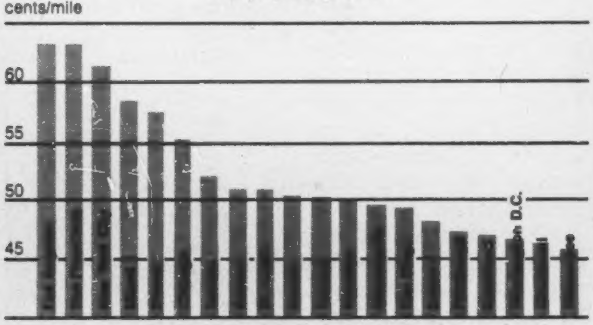
Estimated 20-city averages for other than compacts (also bought new and driven 10,000 miles for five years) are: subcompacts (43.8¢/mile), mid-sized units (60.8¢/mile), and standard-sized cars (68.2¢/mile).

The Hertz study further adds that costs in general have risen only 1¢/mile (under 2%) for compacts from 1985 to 1986. The increase reflects higher sticker prices, insurance, licenses, etc.—items which offset lower car interest rates and gasoline costs.

The study doesn't make any projections for the current year. But given recent boosts in both gasoline and car sticker prices, another possibly larger increase seems likely.

How driving costs vary*

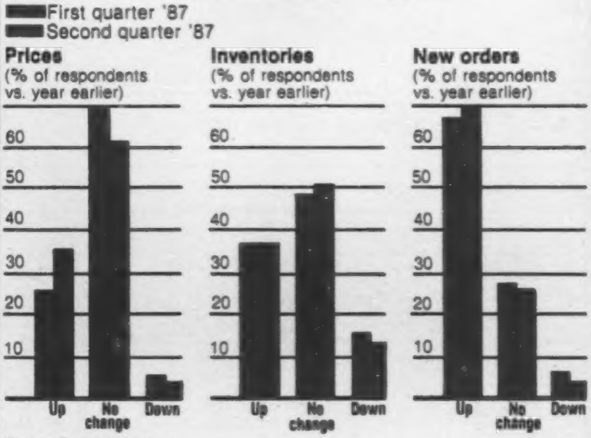
A city-by-city profile



* Assumes new compact car driven 10,000 miles/year & held for 5 years.

Source: Hertz

Business trends: a new manufacturer's appraisal



Source: Dun & Bradstreet

Other key findings of the survey:

- Biggest city-by-city variations are in the category of insurance, licenses, and fees. Figures range from 10.9¢/mile to 27.7¢/mile.
- To reduce overall costs, motorists are continuing to buy smaller cars with fewer options, driving them less, and keeping them longer. Vehicle age, for example, is up 29% over the past 14 years.
- Tolls and garaging are excluded from all cost computations. The former can add anywhere from 2-5¢/mile. Garaging costs from 5-25¢/mile more.

Business analysts still bullish

The nation's businessmen remain quite bullish.

According to the latest Dun & Bradstreet "expectation" survey, more than 70% of 1,400 top executives now anticipate second quarter gains (vs. a year earlier) in both sales and orders.

But the advance will probably mean a modest increase in the inflation rate. Some 35% of manufacturers see second quarter prices running above a year earlier, compared to the 26% reading of three months earlier.

Despite the change in price rise expectations, Joseph W. Duncan, D&B's corporate economist, is not overly concerned. "While the latest survey shows a sharp gain in the percentage of businesses planning price increases, the actual increases in the level of prices will be relatively small," he explains. He predicts only a modest increase in the overall inflation rate.

Inventory trends are not expected to change all that much. The 37% who feel some increases may be necessary to accommodate a faster business pace is precisely the same figure noted three months earlier.

Duncan, commenting on the basically upbeat forecast, adds that "the decline in the dollar over the last two years is finally having an impact on the order books of U.S. manufacturing companies—reflecting our increased competitiveness in both domestic and overseas markets."

The recent tax reform, adds Duncan, could be another plus factor. He feels new tax rules could have a favorable impact on both profit expectations (especially among small businesses) and consumer spending, as the average family experiences a small boost in take-home pay.

CURRENT PRICES

Energy sector flattens stats

Industrial price hikes—as measured by Uncle Sam's Bureau of Labor Statistics—have flattened out after a rather substantial advance in early 1987.

The leveling off has been brought on by new weakness in the energy sector—as diesel oil, residual fuel, and electric power all edged lower over the latest available month. These declines were enough to offset some edging up in gasoline, home heating oil, and jet fuel—and made for an almost 1% fall in energy price averages (see chart).

Take away energy, however, and the upward drift of the first quarter seems to be continuing. This is especially evident in chemicals where organic chemicals and plastic resins rose 2.1% and 1.3%, over the most recent 30-day period.

Construction materials also moved up over the past month. Increases were recorded in fabricated metal products, switchgear, switchboards, millwork, plywood, and heating equipment. The only notable declines were in cement and gypsum products.

Paper also remained buoyant as new boosts were posted in paperboard and corrugated cartons. Here, too, there were exceptions as paper (except newsprint) tended to soften a bit.

A similar mixed upward-tilting pattern was noted for component parts.

Increases were reported for bearings, motor vehicle parts, turbine parts, and aircraft engines and parts.

Metals continued to show a mixed pattern. Steel and aluminum moved up, but copper, zinc, and lead all softened.

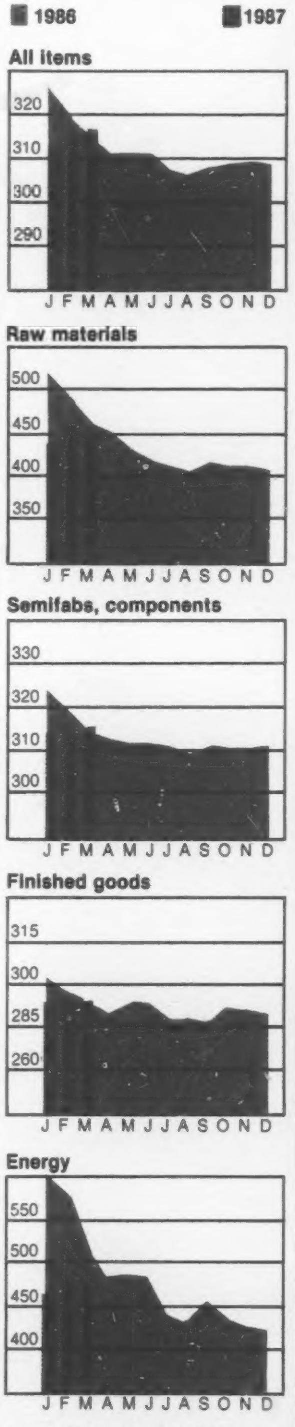
Government price watchers were generally upbeat about the new numbers. As one BLS spokesman said, "It confirms that things are pretty much

This month's breakdown

	Latest level (March)	% change Month ago	from: Year ago
Bearings	358.3	0.6	1.2
Bolts, nuts, etc.	278.2	0.1	1.0
Chemicals, inorganic	291.6	-0.3	-1.9
Chemicals, organic	341.7	2.1	-3.5
Concrete products	324.6	-0.2	-0.1
Corrugated cartons	292.0	0.8	11.1
Cutting tools, small	293.2	-0.1	1.3
Electric lamps (bulbs)	349.9	0.6	1.1
Electronic components	201.7	-0.8	0.7
Fans and blowers	372.4	0.7	1.2
Foundry and forge products	362.8	-0.1	-0.5
Fuel oil (residual)	591.8	-5.3	-8.1
Furniture, commercial	323.8	0.2	3.0
Gasoline	368.5	-0.1	-0.6
Glass, flat	234.6	0.1	2.2
Glass containers	404.2	-0.1	2.5
Gypsum products	327.3	-4.1	-7.0
Hand tools	392.4	0.2	2.5
Hand tools, power driven	242.6	0.0	2.7
Industrial furnaces	401.3	-0.4	1.4
Integrating and measuring instruments	239.7	0.4	2.3
Internal combustion engines	359.2	-0.4	2.8
Lubricating oil	346.2	-1.7	-9.3
Lumber millwork	324.0	0.7	3.4
Material handling equipment	298.9	0.2	1.0
Metal containers	359.4	-0.2	-0.7
Metal mill shapes (nonferrous)	300.0	0.4	-2.2
Metal tanks	299.9	0.7	-1.3
Motors and generators	353.6	0.2	1.0
Motor trucks	314.0	-1.9	3.0
Office and store equipment	157.3	0.3	2.4
Paperboard	292.6	0.8	9.6
Paper boxes and shipping containers	283.9	0.7	6.9
Paper office supplies	243.4	-0.2	2.5
Paint	282.1	0.2	0.8
Plastic resins	293.8	1.3	-2.7
Precision measuring tools	273.7	2.0	2.6
Pumps and compressors	364.8	0.1	1.2
Refractories	370.8	-0.2	-0.2
Rubber belts and belting	333.8	-0.9	-1.1
Scales and balances	233.8	0.0	1.0
Steel products	351.9	0.0	2.0
Switchgear	291.0	1.3	2.5
Textiles, synthetic fibers	148.9	-0.1	-0.7
Textiles, gray fabrics	150.6	-0.1	-0.3
Tires and tubes	231.3	-0.3	-2.0
Transformers and power regulators	237.0	0.2	1.2
Welding equipment	303.4	-0.1	1.4
Wire and cable	359.4	-0.2	-0.7

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics

under control if one eliminates the zigzagging impact of energy." He also pointed to the considerable number of declines over the past month (see table) to back up his noninflationary assessment. His overall price prediction for the next 3-6 months: continued slow increase of 3-4% at annual rate.

STEEL SCENE

Strongest quarter?

Demand for steel mill products continues to hold up fairly well. Distributors report shipping rates running close to 2% above a year earlier—with the January-March period said to be the strongest ever first quarter.

This trend is likely to persist for another few months. Nearly two out of every three firms responding to the latest Steel Service Center Institute (SSCI) survey feel incoming orders will be up over the next three months—far outweighing the 7% who anticipate a drop in new bookings.

In any event, most distributors attending their annual meeting in Miami a few weeks ago were all smiles—and not because of volume gains. Several also indicated that snugness—especially in sheet—was making for somewhat higher selling prices.

They attributed the firmness to a combination of factors: Import restrictions, the fact that USX is still not back to full production, and the difficulty that other producers were having in meeting USX specifications.

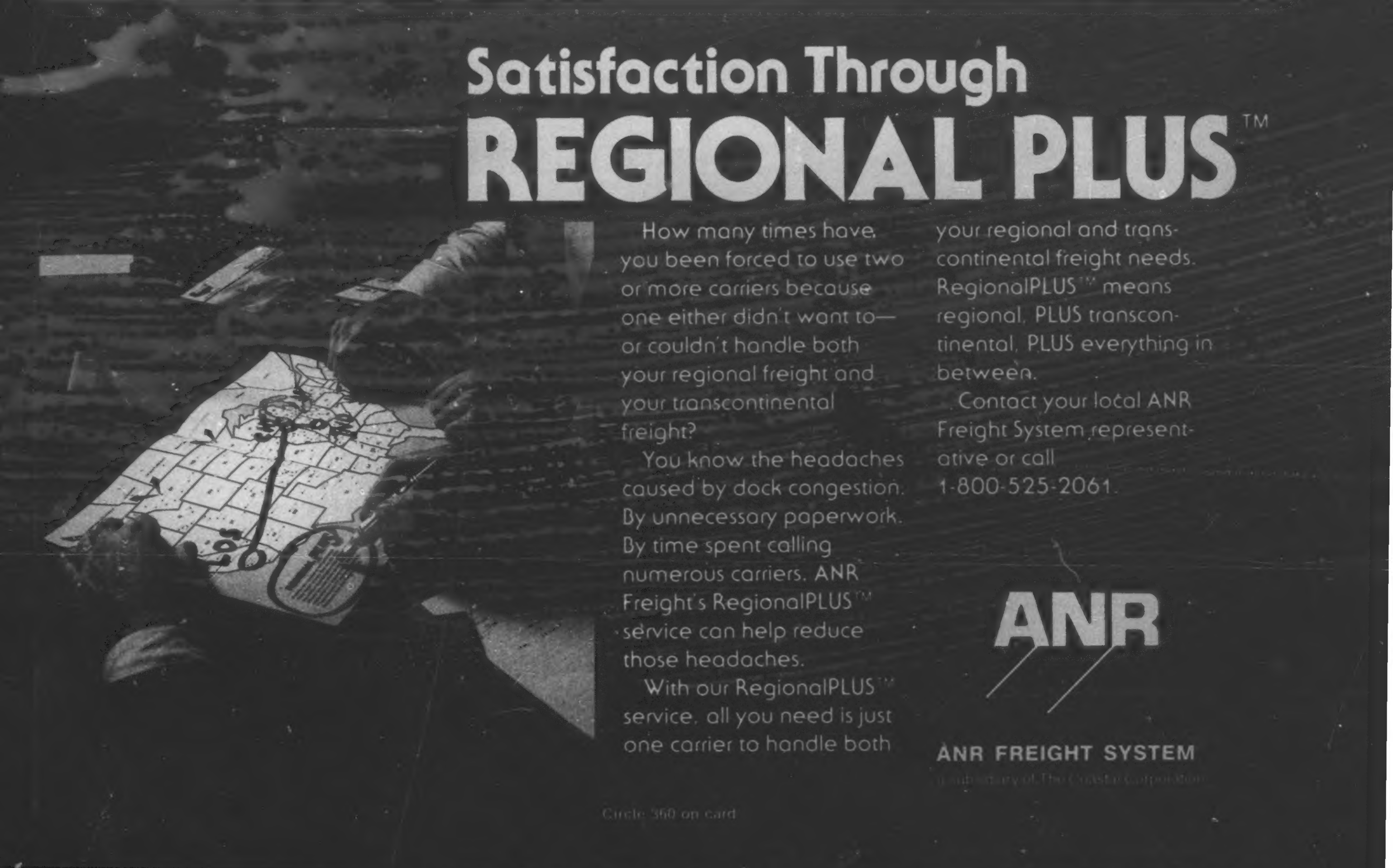
The distributor demand situation is perhaps best summed up by SSCI President Andrew S. Sharkey: "The high plateau in service center shipments is indicative of strong business activity among nearly all customer groups. We're seeing some user inventory rebuilding. The stock-sales ratio for a number of customer groups was recently at an all-time low."

This steel spokesman further adds that the first half outlook is better than originally forecast. On the other hand, Sharkey is concerned about summer and fall when a drop-off could set in—enough to push overall 1987 totals under year-earlier levels.

Similar caution is also suggested by steel buyers responding to the latest N.A.P.M. steel survey. For the first time in four months, the number of PMs planning on a cutback in near-term deliveries outnumbers those anticipating increases.

The number expecting increases is still high—23%, a lot bigger than the single digit numbers of last fall. Nevertheless, it does seem to suggest some demand slowdown.

Even the pickup in buy-



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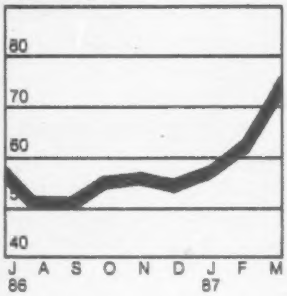
BUSINESS DATATRAK

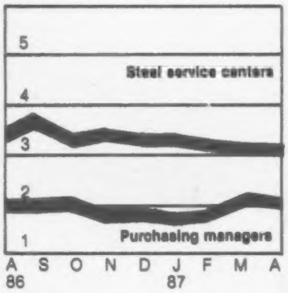
Steel

Operating rates



Inventories

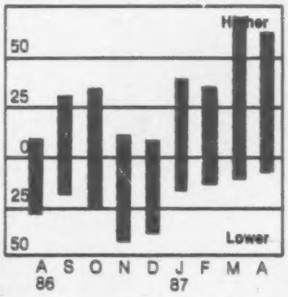
(Months supply on hand)



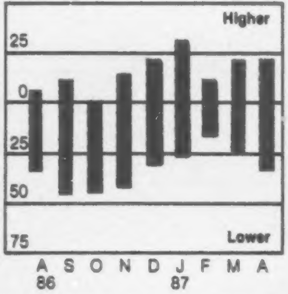
Demand

(Percent of respondents)

Service centers incoming orders



Steel buyer



er inventorying noted by SSCI's Sharkey could be coming to an end. Fully half of the steel purchasing executives queried now say they will be cutting back on their holdings in upcoming months.

Service centers are also moving carefully when it comes to laying in more steel. Some 32% now consider their stocks to be high—compared to the 5% who rate them as too low.

What makes this caution a bit surprising is that it is occurring at a time when there is some concern about supply tightness. Some 18% of those buying coated sheet, for example, say they're concerned. A few are also keeping a watchful eye on cold-rolled sheet (6%).

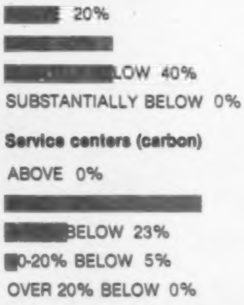
In still another development, 27% of PMs now say they plan to become less dependent on imported steel, compared to an average of only 8% over the previous four months.

One reason for this could be price. Buyers in general are finding it more difficult to locate bargains.

Meantime, domestic steel prices could also rise a bit. At least that's what service centers are saying. Specifically, 40% anticipate increases over the next six months—though most say that the increases should be in the 2-5% range.

Import prices

(Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

PROCUREMENT STATUS

Snugger supplies coming

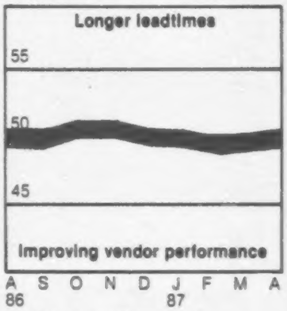
A slight change in the procurement market seems to be in the making. Early spring figures suggest a slight tendency toward snugger supplies. The evidence:

- ***PurchasingWorld*'s leadtime index:** This yardstick of average weekly waits has moved up to 51—slightly above the neutral 50 level when stretchouts and shrinkages cancel each other out. Although the rise isn't much, it signals a change from readings of previous months.
- **Short supply list:** Four items, the largest such number in years, now appear on the N.A.P.M. list. Included this time around are steel, butadiene, styrene, and phenol.
- **Speed of delivery:** Roughly 13% of N.A.P.M. survey respondents say they are currently experiencing slow deliveries—far more than the 5% who note some speedup over the past month. In any case, the 8% gap here is far greater than the average 3% differential noted over the previous two months.

Monthly procurement status report

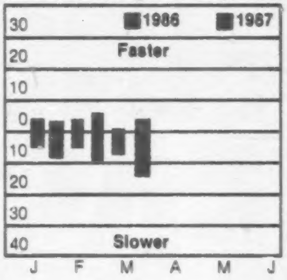
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



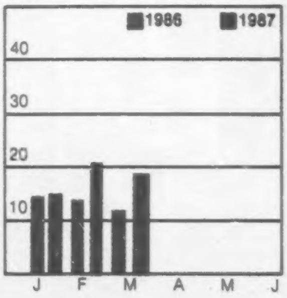
Delivery performance

(Percent reporting deliveries)



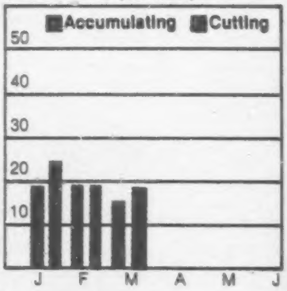
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Why the change? In large part it may be due to reduced imports—as higher overseas quotes, engendered by a weaker dollar, put more emphasis on domestic procurement. Quotas for steel and semiconductors have tended to aggravate this situation.

But imports are not the only reason for the shift toward snugger supplies. Another factor could be somewhat improved business activity in recent months.

Some 41% of the respondents now say their firms are experiencing a rising new order pattern. That's the highest such figure in nearly two years.

The completion of inventory paring also adds to the demand figures. In any case, buyers who are paring are now pretty much balanced out by others who are adding stocks—a major shift from last year when almost all said they were cutting back.

Still others point out that the items in snug supply are likely to prove temporary—primarily because operating rates are still relatively low (80% on average—about 5% under the level when shortages tend to become endemic).

Finally, some PMs say that business may soon take a breather. As one East Coast buyer puts it, "Summer is traditionally a slow period—and there's little to indicate that things will be different this time around."

Leadtimes and availability

Chicago: Steel sheet, coated sheet, and bar are tight for other than regular customers. Special copper and brass sheet and coil are out to 5-7 weeks. Chlorine has also stretched to a week.

Cleveland: There's a slight stretchout in plastic packaging material (to 4-6 weeks)—and a slight shrinkage in polyethylene resin (to 2). Other delays: Softwood (1-3), hardwood (2-3), skids (1-3), corrugated boxes (2-3), maintenance paint (2), cold-finish aluminum (8), and glassine papers (4-5).

Los Angeles: Modest stretchouts with these new higher leads: grey iron castings (6-8), brass castings (8-10), stainless steel coil (14-16), custom storage tanks (10-12), and domestic fasteners (7-9). Foreign fasteners are holding at 16-18 and galvanized steel at 12-14.

Houston: Imported galvanized steel coils are out to 128 days. So are domestic waits. Other current leadtimes (in days): high density polyethylene and polypropylene (32), corrugated cartons (24), steel fasteners (14), plastic bottles (42), and 4-color process printing (42).

Philadelphia: Nickel steel alloy bar is in 4 weeks (to 10). Edging out are stainless steel flat-rolled strip (to 8-9), and stainless extruded tubing (to 6-8).

Pittsburgh: These weekly leads prevail: paper bags (4-6), multiwall bags (6), corrugated and folding cartons (3-4), drums (1), chipboard (3-4), waterproof papers (8), packaging seals (1-2), polyethylene (5), polyvinyl chloride (6), and alloying materials (2).

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BUSINESS DATATRAK

Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	8	8	7½
Plate (Phil)	3½	3½	3½
Plate (Chgo)	4	4	3½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	6½	6½	4
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	6½
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	11	11	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	4½	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	14½
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	2½
Plywood (Chgo)	3	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	3	2½	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	13	13	11
Brass Castings (LA)	9	7	9
Brass Rods (Chgo)	9	9	9
Brass Sheet (Chgo)	6	5	5
Brass Tube (Chgo)	7	7	4
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6

	Now	Month ago	Six months ago
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	7	7
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	24	26	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	19	19	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	4	17
Welding Supplies (Hous)	5	5	5

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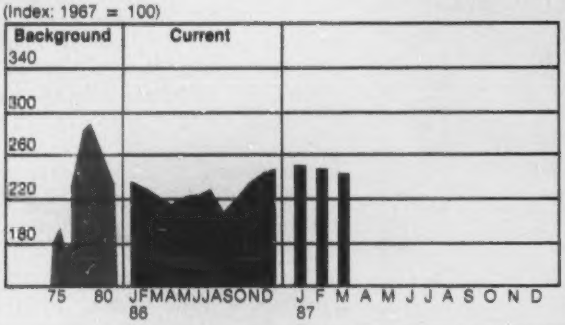
BUSINESS DATATRAK

Raw material price barometer

Latest month 246.3
Month before 247.2
Year ago 223.1

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	15.70	23.95
Steel, bars, Pitts., cwt.	16.50	15.70	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	18.25	18.25	18.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	26.90	25.15
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.630	.625	.613
Antimony, N.Y., dealer, lb.	1.12	1.08	1.35
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb.	1.32	1.31	1.32
Brass, yellow, [sheet], lb.	1.27	1.26	1.27
Cadmium, N.Y., dealer, lb.	0.95	0.95	1.30
Copper, electrolytic, wire bars, refd., lb.	.68	.67	.68
Copper sheet, over 24 in., lb.	1.41	1.40	1.41
Lead, common, N.Y., lb.	.26	.26	.19
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	260.00	235.00	265.00
Molybdenum, oxide, dealer, lb.	3.05	3.10	2.65
Nickel, cathode, dealer, lb.	1.75	1.75	1.90
Platinum, dealer, oz.	576.00	525.00	402.00
Silver, N.Y., oz.	6.90	5.51	5.17
Tin, N.Y., dealer, lb.	3.15	3.13	2.70
Zinc, Prime West, East St. Louis, lb.	.37	.38	.33
Zinc, die casting alloy, No. 3, lb.	.445	.445	.415
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.51	16.53	16.40
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	350.00	350.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.242	.230	.228
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.150	1.080	1.045
Cotton middling, 1", N.Y., lb.	.540	.540	.630
Printcloth, 48", 80x80, N.Y., spot. yd.	.97	1.00	.65
Army duck, 37", 13 oz., yd.	1.405	1.405	1.480
Blended printcloth, 64", 78x54, yd.	.90	.83	.72
20s combed yarns	1.77	1.77	2.05
Wool 64s, Staple, lb.	2.55	2.12	2.00

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	105.00	80.00	100.00
Benzene, petroleum, tanks, Houston, gal.	1.55	1.58	.670
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.285	.285	.345
Polypropylene, homopolymer grade (market price), lb.	.35	.35	.37
Polystyrene, general purpose grade (market price), lb.	.42	.39	.33
Polyvinyl chloride, pipe grade (market price), lb.	.315	.315	.305
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks. lb.	.38	.33	.21
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	152.50	152.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.77	.73
Xylene tanks, gal.	.795	.795	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	328.05	327.30	307.20
Lumber 2x2 pine, mbf, cl	327.84	322.05	305.35
Plywood, plyform, ¾", msf, cl	575.00	566.45	590.60
Plywood, ⅝", msf, cl	378.60	381.90	381.20
Cement, bulk, ton, tl	63.66	63.25	65.84
Sand, ton, cl	6.72	6.82	6.46
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.43	48.15	48.33
Crushed stone, 1½", ton, cl	8.18	8.08	7.92
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.84	0.84	0.83
Gypsum sheathing, ½"x1"x8", msf, tl	206.94	207.84	213.87
Brick, common, per thousand, tl	187.35	188.10	186.71
Asphalt paving, AC-20	128.04	124.66	167.53
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.13	7.37	7.07
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	16.25	14.00	10.50
Fuel oil, No. 6 or Bunker C. N.Y., barge, bbl., reseller	19.50	17.50	16.50
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.555	.520	.585
Gasoline, 94 oct., reg., Chi., tank car, gal.	.538	.518	.435
Heating oil, No. 2, Chi., bulk, gal.	.501	.483	.590
Heating oil, No. 2, N.Y., bulk, gal.	.490	.450	.450
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.453	.475	.400
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.290
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	77.00	80.00	74.00
Steel, No. 1 hvy., dlvd., Chi., ton	71.00	73.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.575	.580	.580
Copper, No. 2, East, wholesale buy, dlvd., lb.	.495	.500	.500
Brass, red, East, wholesale buy, dlvd., lb.	.535	.540	.540
Brass, yellow, East, wholesale buy, dlvd., lb.	.330	.330	.300
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.385	.385	.390
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.420	.420	.415
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.150
Lead, clean solids, East, wholesale buy, dlvd., lb.	.155	.155	.105
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	30.00	25.00	12.00
Paper, old corrug. box, dlr., N.Y., ton	25.00	15.00	12.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.11
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.200	.120	.125

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

15 ways buyers can cut steel costs

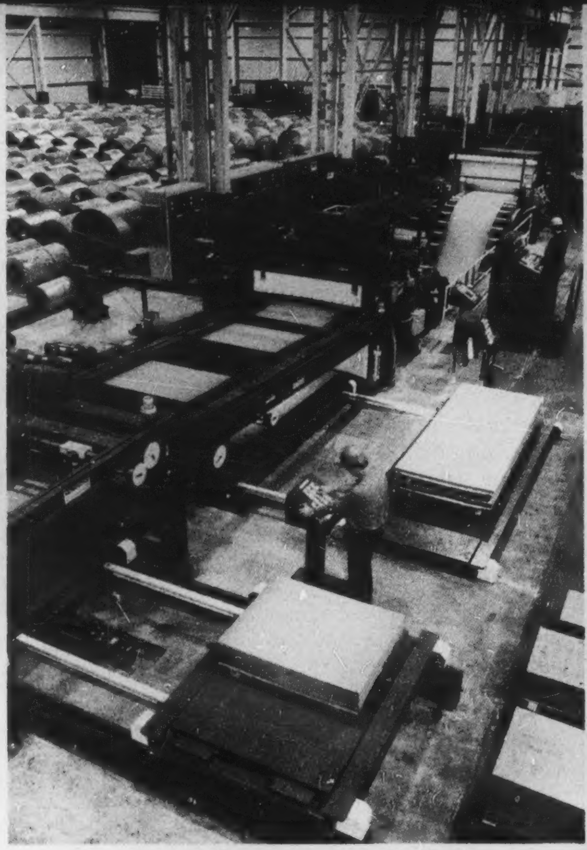


Photo courtesy of Joseph T. Ryerson & Son Inc.

Thomas F. Dillon, C.P.M.,
senior editor

There are several ways a buyer can lower the cost of steel, say steel service center executives, and negotiating a lower price is one of them. But costs also can be reduced by "buying smarter"—taking some obvious and not-so-obvious steps to lower costs. The savings that can be generated by changing buying habits—by buying smarter—can be much greater than a buyer could hope for under the most favorable negotiating circumstances.

In a series of interviews with steel service center executives across the country, the following suggestions were offered on how steel buyers can lower the cost of steel purchased through steel service centers.

- **Limit the number you use.** Carefully selecting a smaller number of suppliers will give you increased volume (and clout) with remaining suppliers, and it will help forge a closer relationship.

Ideally, in such a close relationship, the steel buyer shares information with the steel service center on sales forecasts, production schedules, new products, new orders, cancelled orders, expansion plans, and other data that will give the service center a better fix on the buyer's steel requirements. This in turn will help the service center plan its materials purchases and capital investments.

In such a relationship the service center will keep the steel buyer informed of pending price changes, new lines, discontinued lines, new applications, new materials, and new processing capabilities that will benefit the buyer.

Achieving this close relationship, say several steel service center executives, requires a change in the traditional adversarial relationship between buyers and sellers. This is already happening in many industries. As Frank Subjack, vice president and general manager of Eastern service centers, Tubular Steel Inc., Princeton Junction, NJ, says, "We are in this together. It is not 'you and me,' it's 'us'."

- **Get involved in product design.** "Purchasing has to get directly involved in the product design-engineering-manufacturing process as a member of a design committee, task force, etc. In too many companies," says Michael Simpson, chairman, A.M. Castle & Co., Franklin Park, IL, "purchasing is left out and this is foolish. Who can provide better input about what is available and practical than purchasing?"

Without purchasing's input in the design of a product, a company may wind up spending time and money trying to track down materials and products that are either not available, not suitable, or not economically feasible for the application. Sometimes suitable alternatives are not even considered.

- **Avoid overspecifying.** Every steel service center has a litany of overspecification horror stories. These generally involve specifying expensive products for a function that could have been performed just as effectively with a much less costly product.

Overspecification is usually a result of ignorance, carelessness, lack of knowledge of new products or substitutes, bad habits, outdated spec sheets, new personnel not familiar with the product, and just plain poor buying practices.

This is why service centers often request information on how the material is to be used. Some steel buyers resent this, either because they think their judgment is being challenged, because they believe the service center is trying to sell them something more expensive, or because they believe it is none of the service center's business. "Many think we have ulterior motives," says Subjack, "but we don't. We want to help, knowing that if we do, chances are they'll come back."

Sometimes overspecification is a matter of degree—asking for "special" quality when "commercial" will do the job; specifying critical tolerances when standard tolerances (still pretty tight) will do as well; requesting a leveled product when a flattened product is sufficient, or asking for precision sawing when a sawed product would be adequate.

- **Give service centers the right information.** "A service center," says Simpson, "can only perform on par with the accuracy of the information it receives from its customers." One industry observer suggests that detailed product application information be routinely included on the purchase order.

- **Give plenty of leadtime.** For the same reasons that a purchasing manager wants to get as long a leadtime as possible from his requisitioners (so he can have enough time to scout sources adequately and plan his purchases properly) the service center wants as long a leadtime as possible from its customers. Since the service centers also process metal, knowledge of a customer's immediate and long-term materials needs can help it plan investments in steel processing equipment and in material purchases.

- **Ask for what you need.** "For example," says Jack Foster, president, Joseph T. Ryerson & Son Inc., Chicago, "if you don't need test reports, special packaging, extra fast delivery service, etc., don't include these on your purchase order." In many cases, over time, these specials have a way of becoming "standards" and are shown on all purchase orders more out of habit than need—and they all cost money.

Every purchasing department should review these "specials" to see whether or not they are still needed.

- **Make use of service center expertise.** Chris Turman, ceo, Morris, Wheeler & Co. Inc., Philadelphia, tells of a recent meeting he had with a contractor in which the contractor presented some drawings for a job he was going to bid on. The specs called for seamless tubing, several dollars per linear foot more expensive than welded tubing. The tubing was to be used to carry waste water.

"Someone, possibly with a background in another industry," says Turman, "apparently overspecified, since the welded tubing would certainly have done the job." That contractor now plans to submit two bids, one according to specification, and another as an alternative.

"This is what it takes," says Turman. "You have to get the customer to come in, sit down, and discuss his problems with you to see if you can come up with a solution. To reach this stage you have to build confidence with your customer and develop friendships. If we can help people solve their problems, they're going to come back with other problems."

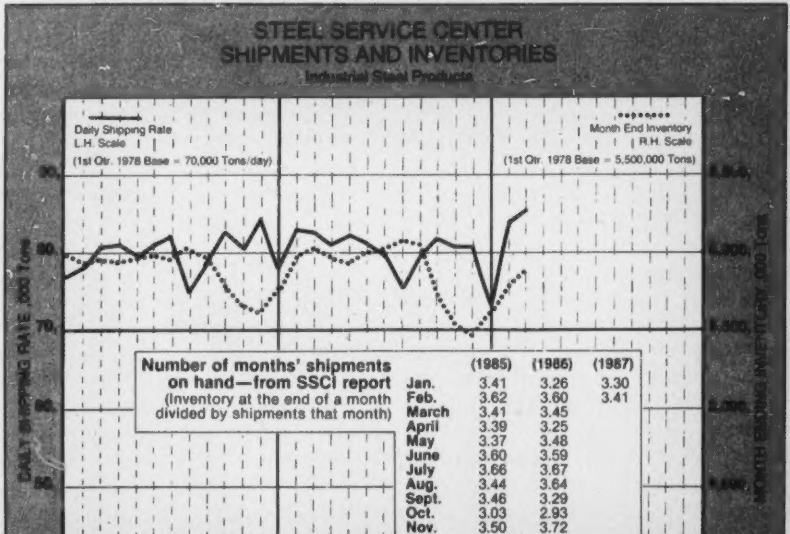
- **Rotate buying assignments.** Subjack suggests buyers cross train on each other's jobs. Not only will this help fill in staffing holes during vacations and days off, it will also promote buyer and department expertise with steel buyers able to exchange views on materials, suppliers, etc. Subjack also makes this suggestion for the steel service center industry.

- **Computers simplify paperwork.** With the increased use of computers in purchasing applications, several service centers offer electronic data interchange (EDI) hookups. Not only can purchasing transmit orders electronically, eliminating paperwork and even use of the phone if desired, in some cases buyers can tap into a steel service center's inventory records to determine the availability and location of the products they want to buy.

Conversely, with the buyer's approval, EDI can enable a service center to check customer inventory levels, and then use that information for automatic restocking plans or to plan its own purchases.

These services, becoming increasingly available and sophisticated, will be one more bond in the service center-customer relationship.

- **Consolidate orders.** A smaller order is more expensive, on a per pound basis, than a large one. As basic as this seems, service center executives report that some steel buyers do not take sufficient advantage of volume ordering to lower costs. Certainly there are many instances where only a small quantity is needed or where a small order will do for a long time. But if there are repeated



Steel service center shipments ran at a near-record rate for the first quarter.

Number of months' shipments on hand—from SSCI report (Inventory at the end of a month divided by shipments that month)

	(1985)	(1986)	(1987)
Jan.	3.41	3.26	3.30
Feb.	3.62	3.60	3.41
March	3.41	3.45	
April	3.39	3.25	
May	3.37	3.48	
June	3.60	3.59	
July	3.66	3.67	
Aug.	3.44	3.64	
Sept.	3.46	3.29	
Oct.	3.03	2.93	
Nov.	3.50	3.72	
Dec.	3.87	3.82	

small orders of the same product, week after week, a steel buyer can save money by ordering less frequently and in larger quantities.

Another way to enjoy the cost-cutting advantages of consolidation is through contract buying, whereby a company contracts to buy a certain quantity of a given product or products from a specific steel service center over a given period of time, usually a year, at a predetermined price. With the assurance of a guaranteed volume of business, service centers are in a position to pass along part of their savings in the form of a lower price per unit. An extra advantage for the buyer, and possibly the more important part of the transaction to him, is the reduction of paperwork as a result of simplified purchasing. Check with service centers to see if they have such programs available.

Whenever such programs are established, says Simpson, make sure all people who will be involved—accounting, receiving, manufacturing, etc., are well-informed. "To make such a program work," he adds, "you have to have everybody buy in, not just purchasing."

■ **Simplify.** Tubular Steel's Subjack says there is money to be saved in simplification. "We can learn from the Japanese. Look at the way they do business. You say 'I'll buy 1,000 tons of steel.' They'll shake hands. That's it. You're going to get your 1,000 tons. But to buy 1,000 tons from a U.S. mill you need all kinds of documentation. Attorneys and accountants have to get into it. Weeks go by and you are still bogged down in the paperwork."

Subjack's advice: Keep it simple—the simpler the better. "But to do that," he says, "you have to trust one another. You have to earn that. It isn't earned overnight."

■ **Use service center expertise.** John W. Jorgensen, president and cao, Earle M. Jorgensen Co., Lynwood, CA, points out that several steel service centers have quality assurance programs and statistical process control capabilities. As confidence builds between service centers and their customers in the quality of the product, customer inbound inspections can be reduced or eliminated—an obvious cost saving.

■ **Improve forecasting ability.** "Accurate forecasting of demand by our customers," says Tom Boehm, executive vp, metals distribution, National Steel Service Center Inc., Parsippany, NJ, "is the engine that drives our own purchasing program and our ability to support our customers' needs. We need a good relationship with our mills, and we need a good relationship with our customers if we are going to be successful in lowering their costs."

■ **Visit service centers.** One minimill executive suggests that steel buyers visit service centers regularly to meet their personnel, look over their inventory, and check out their processing capabilities. These visits can help a steel buyer understand just what an order involves.

■ **Use service center processing.** Jack Foster at Ryerson says that today manufacturers have to do more with less in order to compete in a world market. "Today's steel processing equipment," says Foster, "is more sophisticated. It's faster, it's more accurate, it's more productive, it's more complex and it costs more." If it costs us more, says Foster, it costs the manufacturer more, too, so there is more reason for a manufacturer to look to the service center for his processing than to tie up capital in expensive processing equipment of his own.

In today's global marketplace, purchasing has a special challenge, says Don McNeeley, executive vp, Chicago Tube and Iron Company. This is because of today's compressed manufacturing profit margins. He sees acquisition costs as the critical factor in profitability.

Years ago, says McNeeley, in a primarily domestic market, if a manufacturer paid too much for materials, chances are the error could be offset by an increase in the selling price. Increased costs were simply passed along to the buyer. Not so in today's global marketplace, he says. With strong competition, such costs cannot be passed along. This is why many industry spokesmen contend that today more contribution can be made to a company's bottom line "by buying right than by selling right." ***PW***

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PMs have leverage to keep prices down

Prices may be edging up a bit, but most buyers remain optimistic about holding 1987 price boosts to much more modest proportions.

Top industrial purchasing managers responding to a new nationwide *PurchasingWorld* survey say that procurement costs will be higher, but not all that much higher considering the fact that 1987 won't have the benefit of last year's falling oil prices and a strong dollar.

As one purchasing executive puts it, "I don't think we can match last year's performance but the combination of continued competitive markets, ample capacity here and overseas, and relatively restrained cost increases should still provide us with plenty of bargaining leverage."

Some of the new survey's more specific findings:

■ Overall price increases: The average hike for 1987 as a whole is estimated at 3.1%—only about 1% above the 2.2% advance experienced by these same respondents over the past year.

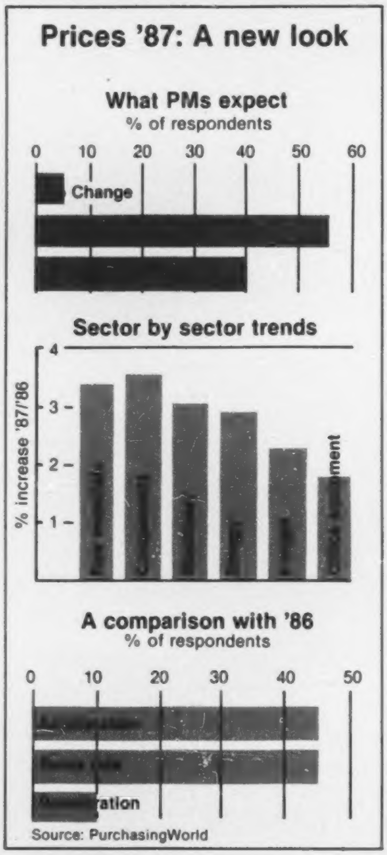
All in all, modest acceleration is expected by 45% of the respondents. And most of the remaining buyers see increases coming in at the same clip as in 1986 (see accompanying chart).

The latest figures are also pretty much in line with estimates for the current year made last December when a similar *PurchasingWorld* survey was taken. At that time, the 1987 increase for all categories was pegged at 3.4%.

Equally significant is the fact that not one single PM expects procurement cost increases to run more than 6%. In fact 60% still plan on advances of 3% or less.

The only deterioration from the December 1986 survey is that this time around no one is anticipating any overall decrease—vs. the 5% who felt that way on the last survey.

■ Sector-by-sector price increases: Generally speaking, there's only modest (1.5%) variation among the six major groups monitored by *PurchasingWorld.* Heading the list is the category of component parts where 1987 boosts are expected to average out near 3.5%.


Prices '87: A new look

Source: PurchasingWorld

Other anticipated increases are to be found in raw materials (3.4%), machinery (3.0%), energy (2.9%), freight (2.3%), and office equipment (1.8%).

These findings are again in line with the earlier survey (see December 1986 issue, page 24), when raw materials and component parts were also expected to lead the pack.

■ Individual product trends: Areas expected to sport significant price boosts include paper packaging, steel, aluminum, plastic, some organic chemicals, precision machined parts, and valves. On the other hand, computers and electronic components are mentioned as likely candidates for price declines.

Asked to comment on why prices would be accelerating—albeit by a very modest rate—buyers cited several factors in addition to higher oil tags and a weaker dollar. Several, for example, pointed to higher vendor operating rates, somewhat improved demand, rising insurance costs, and the profit squeeze faced by some sellers who haven't had a price boost in years.

One packaging buyer also points to indirect "export" effect of the weaker dollar. Specifically, he blames much of the rise in linerboard—and hence in corrugated cartons—on increased board exports engendered by today's relatively cheap dollar.

But buyers insist that they intend to fight advances—no matter what the cause or combination of causes. Many buyers are demanding detailed cost justification for any proposed boost. One PM tells of sending letters to all vendors requesting no increases. "While this doesn't work in all cases, it at least puts our suppliers on notice; we've let them know what we want and expect."

In addition to the above, many PMs continue to stress long-term contracts, blanket orders, consolidation of purchases with fewer vendors, and price guarantees ranging from a few months to a year. Still other buyers say they are working closely with vendors to reduce production costs.

The consensus seems to be that while it is still a buyers' market, as one midwestern purchasing executive puts it, PMs can't beat back every price boosting attempt. But continuous pressure from purchasing has managed to keep those increases very low—and should continue to do so in the next several months. ***PW***

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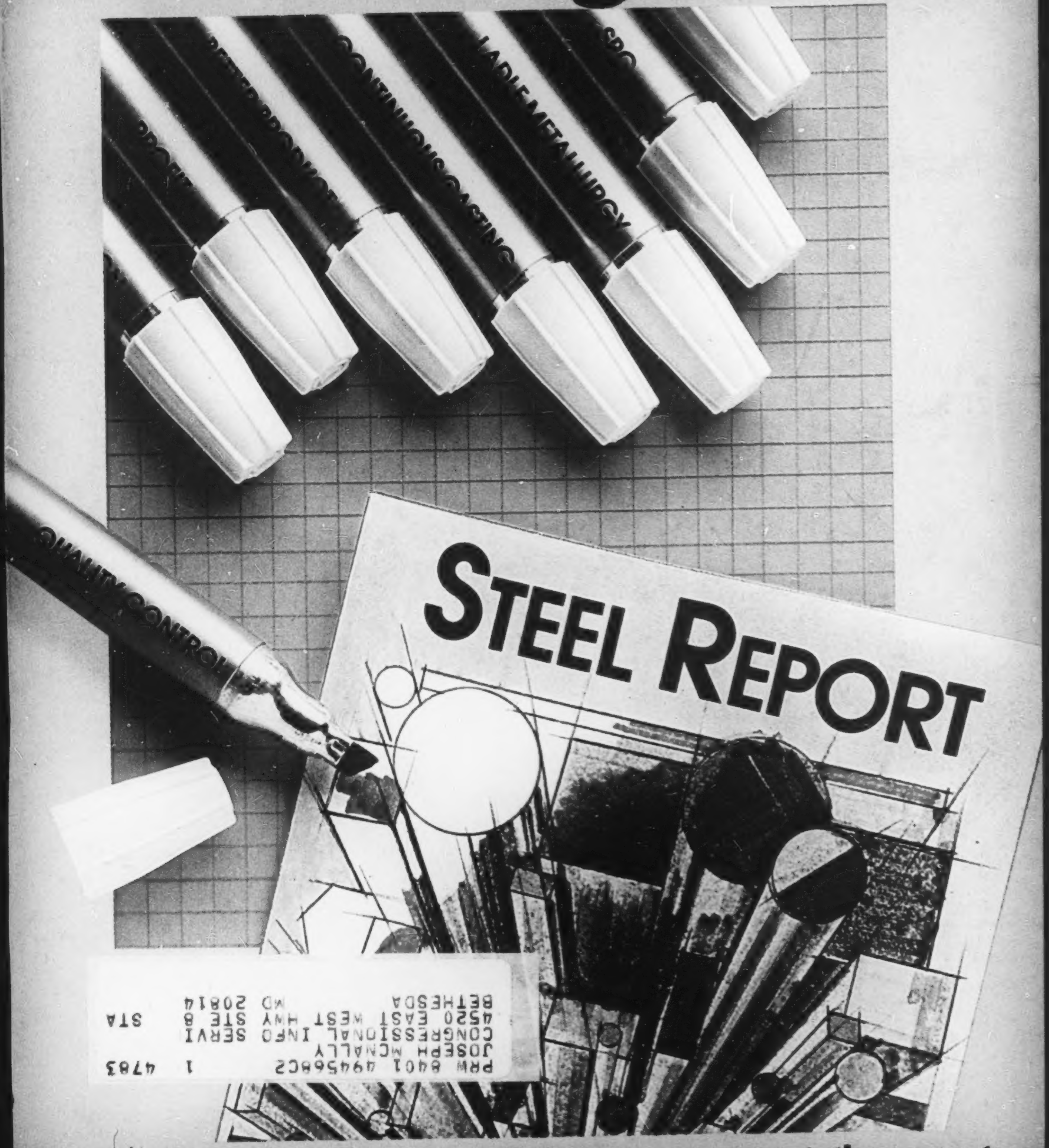
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- Packaging tags going up
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June 1987 Vol. 31 No. 6

Special report: Steel buying

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PW PREDICTS

Robert S. Reichard, executive editor

Prices pose no problem—yet

Take all the recent talk of accelerating inflationary pressures with a grain of salt. Prices are advancing slightly faster than last year. But this probably reflects a move back to the underlying rate of inflation.

There's evidence that things are still under control:

- **A lingering overseas commodity glut:** Keep in mind that oversupplied commodities like steel and nonferrous metals operate in a global market. As such, prices for these products here in the U.S. are likely to remain competitive.
- **Excess domestic factory capacity:** U.S. operating rates continue to hold just under 80%—far under the 85% level needed to end the more than 5-year-old buyers' market. Signs point to little change.
- **Continuing wage restraint:** A new government report finds that hourly compensation in the private nonfarm sector advanced at only a 1.5% annual rate over the past six months. Again, little change is anticipated—as year-to-date collective bargaining agreements call for less than a 2% pay boost over the first year of these contracts. And even these small increases should be at least partially offset by continuing, modest productivity gains.
- **More progress in holding down other costs.** The drive to cut excess fat and streamline operations is paying off—especially in "smokestack" industries like machinery and metals. In the latter sector, one Wall Street analyst figures that average production costs have come down as much as 20% since 1983. All industries continue to benefit from relatively stable raw materials costs and small rises in borrowing rates.
- **Stablizing energy prices:** The worst is over. A new Wharton Econometric forecast sees little change here for the rest of 1987—in sharp contrast to increases of the past quarter or so. While some increases are projected for 1988, they are small. Wharton's equation suggests a 4% rise in average refiners' acquisition costs over that time span.
- **The limited impact of the weaker dollar:** Tags in some industries such as paper have moved up strongly in recent months because of currency shifts. But increases haven't been across the board. Producers in many sectors are not inclined to use rising overseas tags as a reason to raise their own asking prices.

Foreign producers in some areas have opted to absorb exchange rate losses rather than raise prices significantly and jeopardize hard-won markets. Steel is a case in point. Imported metal prices are up only 4% on average over the past year.

- **Still-strong buyer pressure:** The nation's industrial purchasing managers continue to use their buying leverage—insisting on cost justifications for major price increases and getting at least limited price guarantees in exchange for volume orders.

Imports

Import prices continue to climb at a relatively fast clip, reflecting a still-weakening U.S. dollar. Even if the volatile fuel sector is eliminated, the increase over the past three months comes to 2.5%.

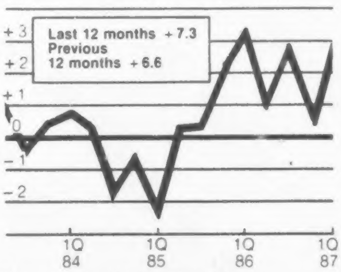
Keep in mind that this is 10% at annual rate. Compared to a year earlier, these tags (again ex fuel) are up 7.3%. If you compare them to two years ago when the dollar was at its high, the drop is an even more precipitous 14.4%. Nor is that the end of the line. Talks with government spokesmen suggest that further boosts are in the offing—with perhaps another 4.5% being added onto averages by yearend.

Here's a more detailed rundown on how these prices have been moving over the past three months:

- **Crude materials:** A 4.8% increase was posted—the biggest in years—led by pulp and wastepaper (8.3%), imported wood (7.3%), metal ores and scrap (2.7%), and crude rubber (0.8%).
- **Fuels:** Tags moved up an eye-opening 29.4% over the latest three-month period—though they still managed to remain 10% under a year earlier.
- **Chemicals:** A 2.9% increase reverses three years of steady decline. Organic types were up sharply—offsetting a 3.4% decline in inorganics.
- **Intermediates:** Each of nine separate categories contributed to a 2.0% advance. The largest boosts were noted in textiles (2.6%), steel (3.2%), and leather (4.3%).
- **Machinery and transport:** Another 3.2% increase brings averages up 11.2% *vis a vis* a year earlier. For the past quarter, biggest hikes were in general industrial machinery (6.1%) and metalworking machinery (5.8%)—with the latter now running 16.6% above a year earlier.

Import prices head still higher

The overall trend (ex. fuel)
(% increase over previous quarters)



Source: Bureau of Labor Statistics

Product by product
(% increase over past year)

Textiles	5.8
Steel bars, rods, shapes	1.6
Fasteners	8.1
Tools	8.5
Elec. motors and gener.	11.9
Textile mchy.	21.6
Printing mchy.	19.6
Metalworking mchy.	16.6
Heating and cooling eqpt.	16.0
Pumps & compressors	17.0
Mechanical handl. eqpt.	21.6
Bearings	11.3
Office mchy.	9.3
Elec. mchy.	10.8
Autos	11.0
Electronic compon.	12.0

PW PREDICTS

Textiles

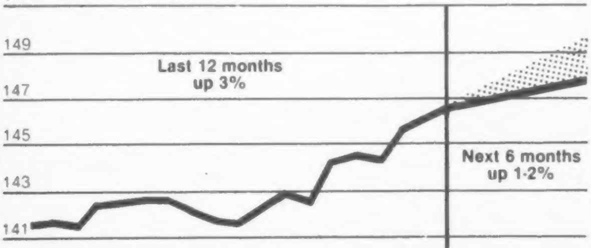
CURRENT SITUATION: Demand is still heading up. Textile mill production is running 7% above 1986—though recent advances have been more restrained. **Price averages are up**—to 3% above last summer's levels. Cotton and wool fibers are up even more. New increases have been posted on nylon textile and carpet fibers. And poly/cotton print cloth fabrics have recently climbed 6¢/yard. Denim has been heading up. **There are higher import tags**—averages are 6% above last year.

DEMAND: Further increases are expected this year. Total mill production will rise another 2-3%, suggesting that **production totals for 1987 will be up 5-6%.** This partly reflects small income gains and sluggish auto sales, freeing more money for smaller-ticket apparel purchases. **Low pipeline inventories are regarded as a near-term plus.** The "Crafted with Pride" and "Quick Response" programs should begin to slow import gains.

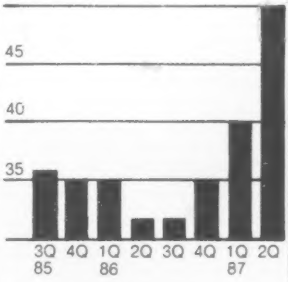
SUPPLY: Things aren't as easy as in 1986. But there's enough spot material to fill in holes. A sign of better market balance: the rise in mill operating rates. **The industry is producing at 94% of potential**—7% above 1986. More capacity is on the way. The industry is increasing capital spending to meet demand needs and to modernize. **One survey points to a 16% jump in mill capital spending in 1987** vs. 7% declines in 1985 and 1986.

PRICE OUTLOOK: Plan on small advances through yearend—with 1% added onto overall price averages in each of the next two quarters. Sparking the increase: rising demand, high operating rates, reduced import availability in some areas as quotas are filled up, and rising fiber costs. For 1987 as a whole, mill product tags should average 3% above 1986's basically flat pattern. **A 4% advance is projected for 1988**—with knitting, broadwoven, and carpet mills sharing about equally in the advance.

Textile mill product prices
(Index: Dec. '75 = 100)



Polystyrene
(Transaction price gp/crystal grade ¢/lb.)



Polystyrene

Still rising styrene monomer costs are forcing asking prices up 4¢/lb. The new quote is 52¢/lb for the general purpose crystal grade. And there's speculation about another boost before too long. Despite the recent advances, demand continues quite strong. Now the industry is talking about a 4.6-4.7 million lb sales year—up 4-5% from 1986. That should be enough to push the overall operating rate up to 86% (vs. 80% last year) as capacity rationalization knocks another 100,000 lb or so off the industry's production potential.

Cobalt

Major African producers are holding lists at $7/lb—with discounts of up to 11% available depending on volume and competitive conditions. Behind their decision to forego an increase: Excess supplies and loss of market share to by-product producers such as Inco and Falconbridge. In any event, there's enough metal available—and the latest $6.50/lb spot price is likely to edge lower in the months ahead. Another price-rise inhibitor: U.S. apparent consumption is expected to show little or no gain from last year's disappointing 7,500 ton total (far under the 8,948 ton peak in 1984).

Computers

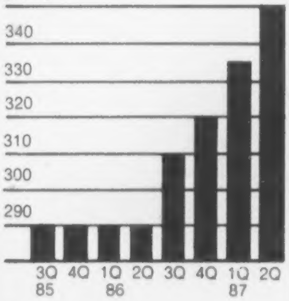
Superminis should start coming down sharply as Prime Computer introduces new models said to offer twice the performance of competing models at the same price. But these powerful computers still aren't cheap—two new machines have base prices of $549,000 and $804,000. Discounting is already reported on IBM's new Model 30 PC—$245 is being shaved off the $1,945 list, which includes 2 disk drives and a monochrome screen. But really cheap clones of the new IBM PC are still at least 6-9 months away.

Postal rates

Mixed news from the U.S. Postal Service. On the rosy side: New rates proposed for mid-1988 would drop tabs on Express Mail—from the current $8.35-104.95 range down to the $7.75-70.00 range. Also anticipated for Express Mail: volume discounts, improved pickup service, and a reduced rate for parcels weighing 8 oz. or less. But this is offset by plans to boost the first class mail rate from 22¢ to 25¢. Charges will also go up for each additional oz.

(up 3¢ to 20¢) and mail on which business customers use the 9-digit ZIP code (up 1.9¢ to 23¢). But the rate for first class mail that customers partially sort by applying computerized bar codes—a new classification—will be 20.2¢/oz.

Linerboard
($/ton)



Paper

Customer resistance has delayed the proposed $30/ton increase in linerboard—probably until the 3Q. This should slow down recent corrugated carton price boosts. Coated paper (notably groundwoods) remain quite competitive as excess capacity keeps sellers on the defensive. Ditto, uncoated grades as tonnage from two new machines comes onto the market. Strength continues in market pulp and tissues where prices are now moving up.

Lead

Don't expect the recent price runup to hold: Increases are not due to demand but to Canadian labor problems. Demand from key battery makers is likely to drop in the weeks ahead—reflecting the start of the traditionally slow summer season. Best bet for prices: general softening once labor woes are resolved—with quotes sliding back into the mid-to upper-20s by late July or August. After that there could be some modest recovery—but probably not enough to sustain even a 30¢/lb quote.

Zinc

A recent rally has brought tags up into the low 40s again. Labor troubles have been behind much of the runup—with some help coming from seasonal demand and falling producer stocks. Quotes should eventually head lower, dipping into the upper 30s this summer as supplies begin to increase again. Nor is any big overall 1987 demand advance anticipated. Right now, U.S. industry is expected to consume only 1% more than the 1,022,000 metric tons that cleared the market last year.

Aluminum

Markets remain strong. Signs of the time: advances in 1) the U.S. ingot market price (to 66-67¢/lb), 2) used beverage can scrap (to 47¢/lb), and 3) selected fabricated products. Also indicative of strength are the start-up of previously idled domestic capacity and a reduced inventory overhang. And with average U.S. smelter costs down to near 53¢/lb, all firms are now solidly in

Copper

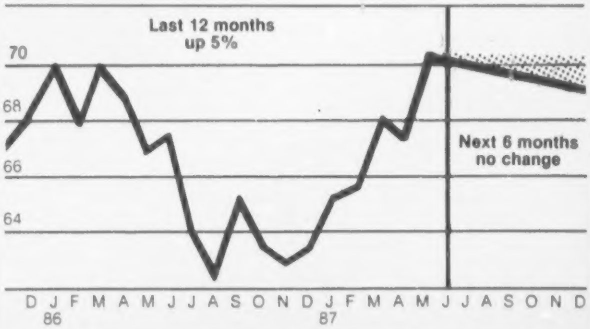
CURRENT SITUATION: Copper has mounted a modest rally, moving up beyond the 70¢/lb level (producer basis) for the first time in over a year. But demand remains so-so as some big markets continue to disappoint. **U.S. producers continue to make cost cuts.** One producer (aided by a new production process and lower labor costs) now talks of a 50¢/lb cost goal. Average industry costs are near 60¢/lb—vs. the 70¢/lb in 1983.

DEMAND: 1987 will not be robust—as major markets (automotive and construction) take a breather. Demand from machinery makers will not be great and there's continued loss in the telecommunications industry to fiber optics. **Domestic consumption will barely equal 1986's 2.13 million metric ton level. Global use could slip from 7.4 million tons in 1986 to 7.3 million in 1987.** No pickup is expected in the long-term. Without big new use, domestic consumption will only gain 1% a year through 1990.

SUPPLY: Total domestic production will be up 7% in 1987. The gain is due to the reopening of Kennecott's Utah Copper Div. and increased output from the solvent extraction-electro-winning process. Totals could increase another 7% by 1991. There's lots of capacity abroad—mostly in the Third World where foreign exchange needs dictate full-scale production. **Falling global inventories are stabilizing and could show gains soon.**

PRICE OUTLOOK: No further appreciable near-term advance is seen given current supply-demand fundamentals. Reduced costs could be a price-rise inhibitor; if prices rise above 70¢/lb, mine reopenings will be encouraged, driving prices back down. Estimates for 1988 suggest no fundamental change. There could be slight advances in line with general inflation. **But there are few signs of 1988's prices averaging above 75¢/lb.**

Producer Copper Prices
(Cents/lb.)



PW PREDICTS

the black. As for the next 3-6 months, all signs point to further modest advances—with ingot moving to the 70¢/lb level by late summer. But that should be it as new and reopened facilities—both here and abroad—begin to add to supply.

Vacancies

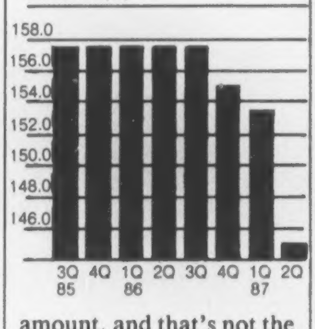
Continue to press for concessions in the glutted office space market. Average suburban rates are up to 23.9%—close to the all-time peak. While there was a fractional decline in downtown numbers, the average 16.3% rate is still quite high. Zeroing in on downtown areas, very high (over 20%) rates are noted for Dallas, Denver, Houston, Miami, New Orleans, Oklahoma City, Portland (OR), Salt Lake City, and San Antonio. There should be good buys on factories, too—as the industrial vacancy rate rises to 5.9%—a new all-time peak.

Sulfur

Tags are weakening as Frasch producers battle it out with producers of recovered material in what is now a relatively sluggish market. World demand is expected to advance only 1.7% this year—to 60.2 million long tons. The new, discounted quote for Frasch sulfur is just $135/ton, FOB Tampa—off $8/ton from previous levels. Prices for recovered sulfur are said to have dropped by a similar amount, and that's not the end of the line. Some users predict another decline later this year—especially after the phosphate industry has its seasonal slowdown.

Sulfur

($/long ton list price F.O.B.Tampa)



Computer security

The market for both products and services is soaring—and should reach $2.8 billion this year (up 700% from 1982). And there's potential for a lot more growth, according to a new study by International Resource Development. The Norwalk, CT-based market research firm cites the fact that large corporate data processing managers are still taking "hair-raising risks" with their computer information—through neglect of both backup and safety provisions. Two new protective approaches: use of fiber optic modems which makes tapping almost impossible, and use of biometric systems which provide positive identification by measuring aspects of a person's physiology that are not susceptible to duplication.

Computers

Change is taking place in the dynamic personal computer market. Latest developments include continuing price erosion; introduction of new, more powerful models; and better 1987 demand gains than expected.

Most major vendors have followed IBM in reducing prices on existing models to make room for newer ones. Reductions in recent weeks—some more than 20%—have been announced by AT&T, NCR, Hewlett-Packard, and Epsom America.

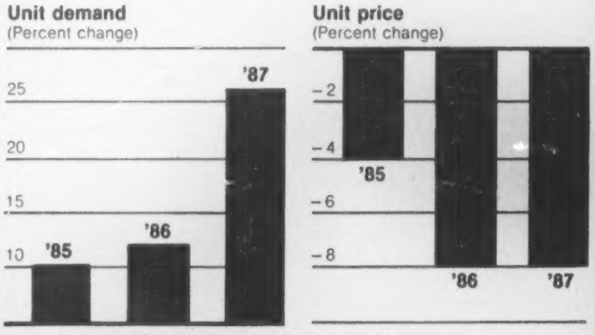
The question is how long the current quotes will hold before the next round of price cuts. There could be some stability until early fall as users evaluate IBM's new product offerings known as the Personal System/2. But after that, there could be further price attrition especially when new IBM clones begin to hit the market.

No matter how small the price decline, there does seem to be renewed interest in purchasing these machines. IBM, Apple, Tandy, and Compaq all report substantial early 1987 sales gains. This has lead the industry to upgrade its forecast suggesting a 25-30% unit gain for 1987.

Much of this advance is based on the introduction of newer models. Other factors include the shift to direct sales methods for marketing PCs to businessmen and the proliferation of software that has made PCs more useful and easier to work with. And there's the price decline which has made fully-equipped IBM clones available for as little as $750. While the newer models will cost more than that, prices in terms of computer power are lower than ever.

The increase in computer activity is not limited to PCs. A new study by Data Resources Inc. suggests that the entire industry (minis, mainframes, and PCs) will have a good year. Its recent survey of 537 companies reveals that computer and office buyers expect to increase their spending on such products by 28% this year vs. the 8% drop in 1986.

Personal computer market trends


Unit demand (Percent change)

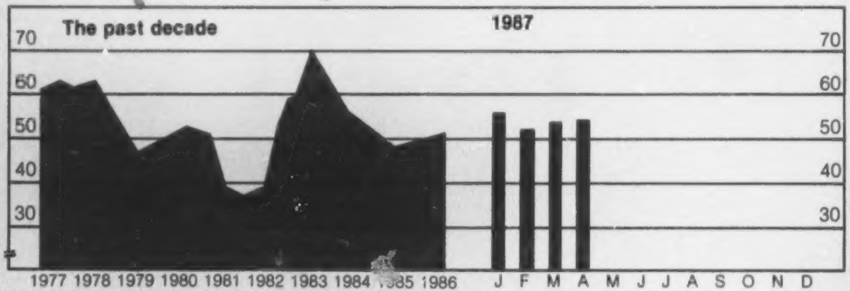
Unit price (Percent change)

Source: Computer & Business Equipment Manufacturers' Association

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

1987 keeps looking better

The next few months don't look bad—considering that activity normally slows down during the summer months.

The most encouraging sign is that the bellwether N.A.P.M. Business Barometer continues to hover around 54—four points above the neutral 50 mark. The N.A.P.M. Business Survey Committee chairman observes, "Past experience indicates that if this were to continue for the rest of the year, it would be consistent with real GNP growth of about 3%."

Committee members—by an 8-to-1 margin—also expect 1987 to be better than 1986. This marks an improvement over last December when the ratio of optimists to pessimists concerning 1987 was only 3-to-1.

But there are concerns. Some people feel that today's higher interest rates could put a crimp in near-term advances; this seems unlikely. While there could be some fall-out in the construction sector, the increase shouldn't have much impact on other sectors such as retail sales and capital spending.

The weaker dollar is offsetting higher interest rates and should help stimulate exports and reduce imports. The trade deficit will be driven down, exercising some positive impact on domestic demand and industrial production.

On the latter score, output should rise at about a 3% annual rate over the next six months—enough to push the yearly average gain to about 2%.

More reassurance—look at the accompanying chart which shows low factory stock sales ratios—more than 5% under a year ago. This ratio almost always tends to rise in the latter stages of a business pickup.

Low inventories mean new orders will require new production. This will have a stimulating effect on the economy.

Not everything is pointing up. Auto sales continue to disappoint (see chart) lagging far under last fall's readings.

Detroit has cut production schedules to only 1.5 million domestic cars—8% lower than one year earlier. These totals could change if financial incentives whet consumers' appetites.

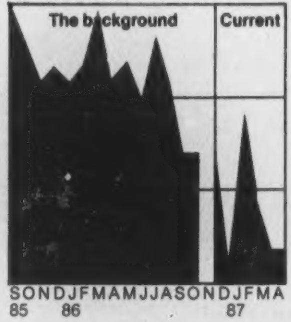
U.S. families don't show any indication that they're cutting back. Retail sales, except cars, remain brisk. Continuing low savings rate and consumer expectation surveys point to relatively good overall spending in the months ahead.

The employment picture also remains fairly bright. Help wanted advertising—a key indication of near-term trends—is actually moving up and is now at its highest level in years.

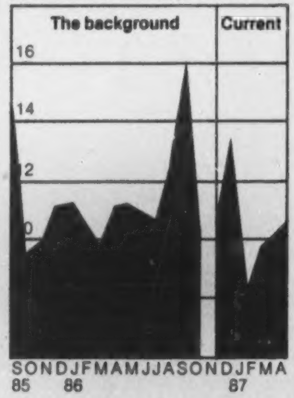
The Conference Board

Leading indicators

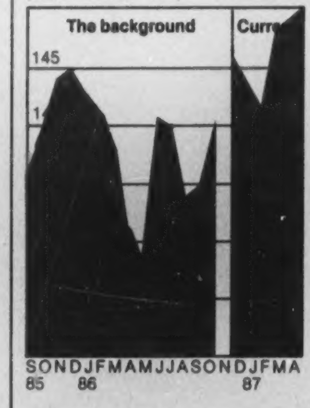
1. Factory stock/sales ratio
(months supply)



2. Auto sales
(mil. of units, seas. adj. annual rate)



3. Help wanted advertising
(Index: 1967 = 100)



(compiler of these numbers) notes that business leaders appear more disposed to step up hiring.

If nothing else, this should keep the unemployment rate from rising. Right now, jobless totals are expected to remain near the first quarter's 6.7% level. That would mean some modest progress *vis a vis* last year when 7% of the nation's labor force, on average, was looking for work.

Lazy days ahead for operating rates

The year is nearly half over and there's still no appreciable increase in factory operating rates.

Latest government reports show the average utilization figure still holding in the low under-80% range (see table)—virtually unchanged from the previous few quarters. There has been no significant trend in this key business barometer for over three years. That's why availability and price continue to present few problems to industrial buyers.

Why the stability? In statistical terms, it reflects recent slow industrial growth which is being offset by continuing capacity additions. The 2.1% increase in production potential over the past 12 months very nearly matches the 2% advance in industrial output over the same period.

There are a few areas where demand seems to be approaching capacity. Paper industry operating rates are currently running in the 96%+ range. And textiles aren't far behind at 94%.

But even in these cases, things are under control. The paper industry, for example, prefers a very high operating rate. As for textiles, there are enough overseas producers ready, willing, and able to plug up any holes in the supply line that might develop.

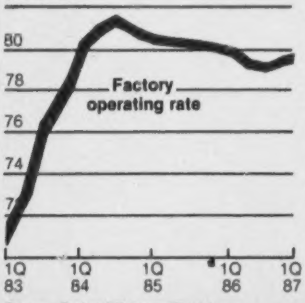
Other industries are hard-pressed to remain at the low 70% level. This is true of machinery (both electric and non-electric) and primary metals. Mining also remains in the doldrums around the 75% level.

More important, there is little indication of any meaningful change in the overall situation. Most forecasters see industrial production advancing by no more than 3% over the next 12 months. So even if one assumes the same slow 2% rate of growth in new capacity, that would still leave operating rates under 81% by mid-1988.

This is still quite low by historical standards. Most economists see 85% as the dividing line between a buyers' and a sellers' market. By no stretch of the imagination does this rate seem possible in the near future.

Capacity: Still more than ample

The big picture
(Percent)



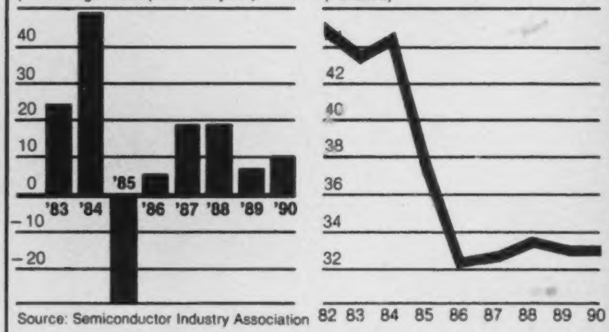
Source: Federal Reserve Board

Industry by Industry
(Latest operating rates-%)

Primary metals	70.2
Fabric metal products	80.4
Non-electric machinery	69.3
Electric machinery	70.5
Autos	81.2
Aerospace	89.1
Instruments	78.2
Textile mill products	94.3
Paper & products	96.7
Chemicals	82.0
Petroleum products	88.7
Rubber & plastic products	87.5
Utilities	81.5

U.S. semiconductor demand: Two views

Consumption changes (% change from previous year) — **Share of global use** (Percent)



Source: Semiconductor Industry Association

No more dip for chips

Semiconductor demand is on the rebound after several years of disappointing results. New figures released by the Semiconductor Industry Association provide the details:

- U.S. consumption is expected to hit $10.1 billion this year, up 19% from 1986. And 1988 is expected to see a similar 19% advance (see chart).
- Quarterly figures are even more optimistic. Each quarter this year is expected to top the previous one, so that 4Q 1987 will top 4Q 1986 by 29%.
- Non-U.S. growth, while certainly respectable, will be more restrained. Japanese usage is targeted to increase only 12% and 14% in 1987 and 1988.

Nevertheless, Japan should continue to be the world's biggest consumer of chips. That's because they specialize in the kinds of products—digital TVs, VCRs, etc.—that require heavy use of semiconductors.

Viewed from a product basis, the most dramatic global demand gains will again be in CMOS, as the shift continues away from the NMOS- and PMOS-based technologies. Usage of CMOS LOGIC devices should show worldwide advances of 34% and 29% in 1987 and 1988.

Similarly global CMOS MEMORY consumption, starting from a base of less than $1 billion last year, will grow 57% in 1987 (to $1.5 billion); subsequent annual increases of 38-52% per year should bring totals up to $4.6 billion by the end of the decade.

Integrated circuits should show increases, too. Worldwide advances for both 1987 and 1988 are expected to be 19%. There could be some slowdown in 1989 and 1990. Gains

BUSINESS DATATRAK

over this latter period are expected to be 9-11% per year.

CURRENT PRICES

More modest increases

Chalk up another month of modest industrial price hikes.

PurchasingWorld's latest rundown—collected from the Bureau of Labor Statistics—suggests overall prices advanced 0.5%, or 6% at annual rates.

Part of this reflects a continued rise in fuel and power costs (up 1.7% over the latest month). Increases were posted on crude petroleum, natural gas, gasoline, home heating oil, diesel fuel, and residual fuel. These were more than enough to offset declines in electric power, coal, and liquid petroleum gas.

Energy increases spilled over into products such as industrial chemicals, synthetic rubber, and plastic resins. The latter jumped a sharp 2.6% over the month as boosts were posted in polyethylene, polypropylene, polystyrene, PVC, and ABS.

Several metals also rose. Gold and silver lead the way while lead, zinc, copper, and aluminum all managed to post modest boosts. Ditto steel, where discounts continued to narrow.

There were also some increases in capital equipment—up 0.3% overall for the month. Hikes were noted in autos, light trucks, X-ray equipment, and commercial furniture. On the other hand, some small declines over the period affected heavy trucks, oil and gas field equipment, and transformers.

About the only weak area was construction materials, where declines were reported for plastic plumbing products, plywood, nonferrous wire and cable, metal valves, and asphalt felt and coatings. But lumber millwork continued to edge up.

The current overall rate of increase is expected to slacken over the next few months—primarily because of flattening energy prices which should moderate impact on chemicals and plastics.

One BLS spokesman sees industrial prices through summer rising at a 3-4% annual rate. That's more than the 6% annual rate of a few recent

This month's breakdown

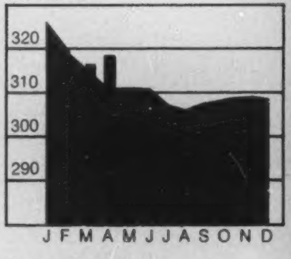
	Latest level (April)	% change from: Month ago	Year ago
Bearings	358.2	0.0	0.7
Bolts, nuts, etc.	278.0	−0.1	0.9
Chemicals, inorganic	291.6	0.0	−1.6
Chemicals, organic	346.4	1.4	3.8
Concrete products	325.7	0.3	−0.2
Corrugated cartons	294.1	0.7	11.9
Cutting tools, small	294.2	0.3	1.3
Electric lamps (bulbs)	347.5	−0.7	−0.3
Electronic components	202.2	0.2	0.9
Fans and blowers	371.4	−0.3	0.9
Foundry and forge products	363.7	0.2	−0.2
Fuel oil (residual)	614.6	3.9	18.8
Furniture, commercial	326.3	0.8	3.1
Gasoline	388.8	5.5	14.2
Glass, flat	236.9	1.0	3.0
Glass containers	403.8	−1.0	2.3
Gypsum products	324.5	−0.9	−6.3
Hand tools	393.3	0.2	2.7
Hand tools, power driven	242.6	0.0	2.5
Industrial furnaces	402.8	0.4	2.2
Integrating and measuring instruments	239.9	0.1	2.3
Internal combustion engines	359.0	−0.1	1.8
Lubricating oil	351.5	1.5	−6.8
Lumber millwork	326.4	0.7	3.6
Material handling equipment	299.4	0.2	1.1
Metal containers	360.6	0.3	−0.4
Metal mill shapes (nonferrous)	305.6	1.9	1.9
Metal tanks	300.9	0.3	−0.8
Motors and generators	355.0	0.4	1.4
Motor trucks	323.8	3.1	4.4
Office and store equipment	157.5	0.1	2.1
Paperboard	295.8	1.1	10.5
Paper boxes and shipping containers	284.9	0.4	7.1
Paper office supplies	244.0	0.2	2.1
Paint	282.9	0.3	0.8
Plastic resins	301.4	2.6	1.6
Precision measuring tools	272.6	−0.4	2.2
Pumps and compressors	365.2	0.1	1.1
Refractories	371.2	0.1	−0.2
Rubber belts and belting	334.5	0.2	−0.6
Scales and balances	234.0	0.1	1.2
Steel products	351.9	0.0	1.7
Switchgear	290.9	0.0	1.5
Textiles, synthetic fibers	147.5	−0.9	−1.5
Textiles, gray fabrics	153.1	1.7	1.2
Tires and tubes	232.2	0.4	−1.6
Transformers and power regulators	236.1	−0.4	0.6
Welding equipment	303.9	0.2	1.4
Wire and cable	203.7	−0.8	−1.5

Industrial prices

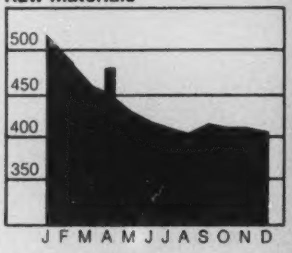
(Index: 1967 = 100)

■ 1986 ■ 1987

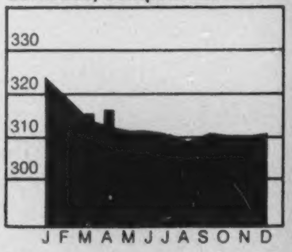
All items



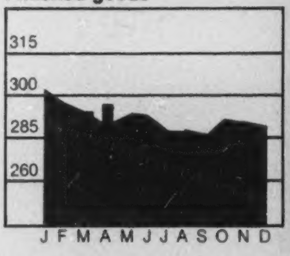
Raw materials



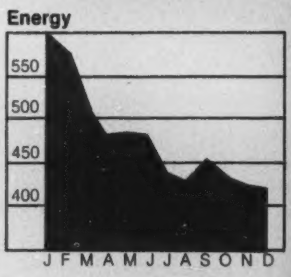
Semifabs, components



Finished goods



Energy



Source: Bureau of Labor Statistics

months, but a lot different than last year, when sagging oil helped bring general declines.

STEEL SCENE

Plate availability concerns creep in

The nation's steel buyers are becoming more concerned about availability. More than half of the respondents to a new N.A.P.M. survey are uneasy about at least one steel item. Major concerns center around sheet products. Many PMs are keeping an eye on both cold-rolled and coated sheet.

Steel service centers tell the same story, noting that supplies from integrated domestic producers and importers are tight. Many feel that voluntary restraint agreements are finally beginning to work.

One distributor adds, "There's just no flat-rolled available through June, or galvanized until late September. I'd say the mills are falling behind."

Leadtimes for steel plate have lengthened dramatically since the first of the year—typically reaching 12-14 weeks, and 14-16 weeks for heat treated grades. One reader, querying the widely-published 3-4 week leadtimes in steel plate, pointed to his experience of waits up to 16 weeks. One mill, he said, is unwilling to commit to any delivery date in the 3Q.

The average American Iron and Steel Institute operating rate also supports a snugger market scenario. Over the latest reported month, mills operated at 80% of their potential vs. the 60-65% figures of January and February.

This increasing uncertainty about supply could be one reason why inventories have been edging up in recent days—reaching the equivalent of 2.07 months' supply on the buyer level. This is about 4% above the months' supply reading of just 30 days earlier.

Some inching up in steel distributor inventories has also occurred. The latest Steel Service Center Institute (SSCI) survey puts its members' months' supply at 3.27—a few percentage points above month-earlier readings.

Add in early 1987 consumption gains, and it's easy to see why demand has turned a lot more bullish. In any case, PMs planning to increase steel buys now outnumber those who see some pullback.

The story is the same on the service center front but

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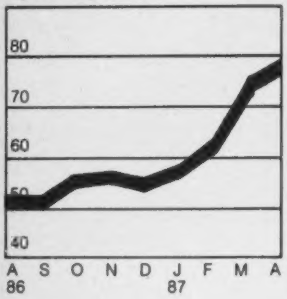
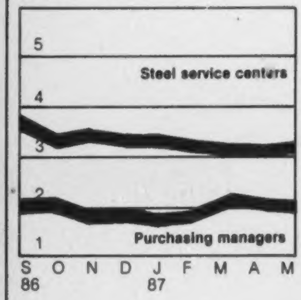
BUSINESS DATATRAK

Steel

Operating rates

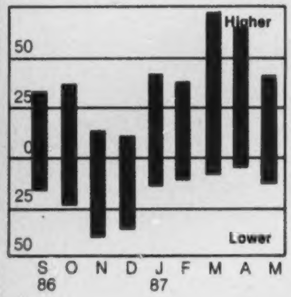


Inventories
(Months supply on hand)

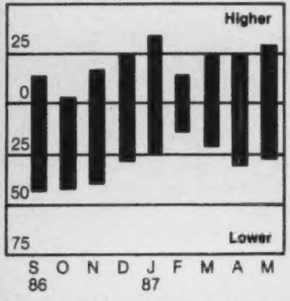


Demand
(Percent of respondents)

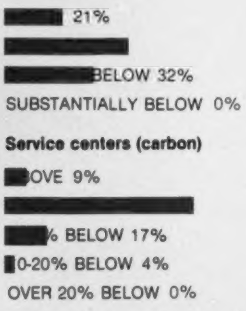
Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

the figures are more impressive. The 42% who expect an increase in new orders over the next three months outnumbers those who predict a decline by a ratio of four to one.

The big question is whether these demand forecasts are realistic or merely straight-line projections of first quarter shipment gains.

SSCI president, Andrew G. Sharkey, isn't quite sure. He notes that some change in member company business climate is entirely possible. He thinks that in the months ahead, member companies will experience the full impact of mill price increases, especially in sheet and plate, which may place them in a difficult position with larger end users.

Also of concern to Sharkey are current forecasts for reduced steel consumption in 1987 and questionable market strength in some key steel-consuming sectors.

Getting back to prices, most service centers ate the recent runup. This doesn't show up in official government indexes which are list-oriented. But look at transaction tags, and some items are running $60/ton above late 1986 levels.

The fear of further advances is readily apparent from an SSCI survey question on replacement costs over the next six months —53% of respondents see these costs rising. Only 6% hope for declines.

About the only encouraging sign is that most of the anticipated boosts are in the modest 2-5% range —not that much given current market conditions.

Another interesting development on the price front: Only 21% of service centers say they are now being offered carbon steel below comparable U.S. levels. A year ago the figure was 61%.

PROCUREMENT STATUS

No wait problems expected

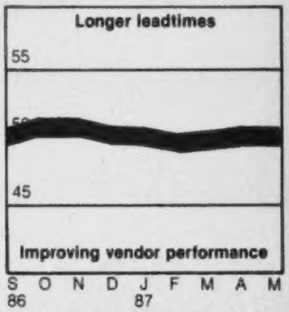
Late spring seems to have ushered in a few problems, but all seem manageable.

Some steel items are harder to get. The situation should improve by late summer or fall as demand levels off and additional production is introduced. Some electronic items have stretched out because of reduced Japanese availability. There should be enough once the trade situation is straightened out.

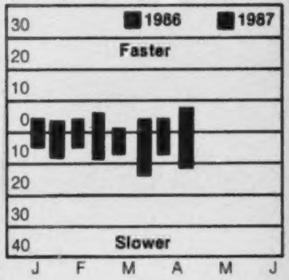
Most buyers see the above as exceptions and expect a problem-free second half. This is borne out by *PurchasingWorld*'s

Monthly procurement status report

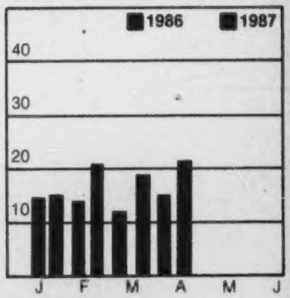
Leadtime index
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



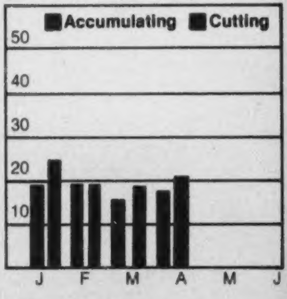
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

leadtime index of 150 items. It now stands at 51 (50 is neutral).

Viewed from another perspective, most items remain unchanged—not bad considering that industrial production has been edging up in recent months.

N.A.P.M.'s speed-of-delivery index says that although more PMs are reporting slower vendor performance (11%) than faster (7%), the difference is small. Most report no change.

Buyers cite several factors for few procurement headaches: low operating rates, better communication between buyers and sellers, and a heavy influx of imported items.

A few buyers are upset by higher prices (increases have been outnumbering decreases since before January). But this is being taken in stride.

Lack of concern about shortages and price pickups shows in the decision by most PMs to keep inventories lean. A few may have slid in extra tons of steel, but not enough to prevent another decline in overall inventories. At latest report, 21% of the queried buyers were cutting, with only 17% adding to stocks.

The most reassuring sign of all is that 51% of the N.A.P.M. respondents are continuing to commit 30 days or less in advance for production materials vs. 54% in 1986.

Leadtimes and availability

Chicago: H-r bars are out (to 10-12 weeks) as are heavy and light plates (to 8-10). Softening auto sales should help ease steel. Extensions include special copper and brass sheet (10-12).

Cleveland: Plastic packaging waits have dropped (to 4-5 weeks). Other leads: alloying materials and plastic shrink film (on demand); glassines and greaseproof papers (4-5); hardwood lumber, corrugated boxes, folding boxes, and PVC resin (2-3); and steel canisters (2).

Los Angeles: Current leads (in weeks): aluminum sheet (12), aluminum tubing and plate (12-14), standard fasteners (4), special fasteners (8-10), standard valves (10-12), standard bearings (20-24), plastic resins (8), linear ICs (30), lube oils (2), and polyethylene bags (4).

Houston: Large pumps are down (to 4-6 months). Heavy carbon won't be available until September. The Japanese are reluctant to bid on rotating equipment (motors, pumps, fans).

Philadelphia: Stretching out are (in weeks) stainless round coil (12), memory ICs (14-16), EPROM ICs (on allocation), and less-than-1% metal film resistors (12-14). Coming in are 1-5% metal film resistors (6), LTL ICs (8-10), and ferrite transformers (12-14).

Pittsburgh: Zinc is out to 3 weeks. Unchanged are other alloying materials (at 2), paper bags (4-6), multiwall bags (6), corrugated and folding cartons and lumber (3-4), wirebound boxes (4-5), waterproof paper (8), coil coating paint (4), polyethylene (5), and PVC (6).

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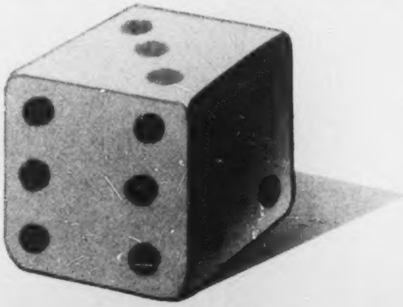
BUSINESS DATATRAK

Leadtimes (in weeks)	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	8	8	10
Plate (Phil)	12-16	3½	3½
Plate (Chgo)	12-16	4	4½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	6½	4½
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	6½
Structurals (Chgo)	4½	4½	4½
Structurals (Hous)	11	11	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	7	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	14½
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

	Now	Month ago	Six months ago
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	2½
Plywood (Chgo)	3	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3



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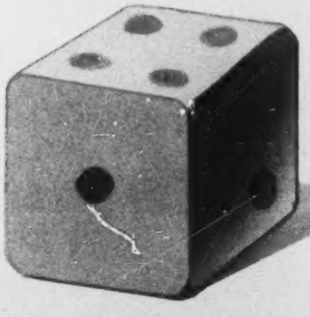

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	12	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	13	13	11
Brass Castings (LA)	9	9	9
Brass Rods (Chgo)	7½	9	9
Brass Sheet (Chgo)	11	6	5
Brass Tube (Chgo)	13	7	4
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6

	Now	Month ago	Six months ago
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	3	2	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	9
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	24	24	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	24	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	4	17
Welding Supplies (Hous)	5	5	5

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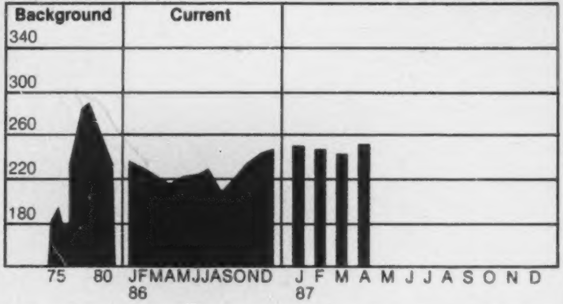
BUSINESS DATATRAK

Raw material price barometer

Latest month 252.3
Month before 246.3
Year ago 219.9

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	18.25	18.25	18.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	26.90	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.655	.630	.595
Antimony, N.Y., dealer, lb.	1.15	1.12	1.35
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb.	1.33	1.32	1.32
Brass, yellow, [sheet], lb.	1.28	1.27	1.28
Cadmium, N.Y., dealer, lb.	1.20	0.95	1.19
Copper, electrolytic, wire bars, refd., lb.	.69	.68	.68
Copper sheet, over 24 in., lb.	1.42	1.41	1.41
Lead, common, N.Y., lb.	.33	.26	.19
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	310.00	260.00	253.00
Molybdenum, oxide, dealer, lb.	3.05	3.05	2.75
Nickel, cathode, dealer, lb.	1.92	1.75	1.94
Platinum, dealer, oz.	616.00	576.00	412.00
Silver, N.Y., oz.	8.81	6.90	5.23
Tin, N.Y., dealer, lb.	3.19	3.15	2.62
Zinc, Prime West, East St. Louis, lb.	.45	.37	.33
Zinc, die casting alloy, No. 3, lb.	.465	.445	.415
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.44	16.51	16.27
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	350.00	350.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.241	.242	.237
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.130	1.150	1.045
Cotton middling, 1", N.Y., lb.	.630	.540	.645
Printcloth, 48", 80x80, N.Y., spot. yd.	1.00	.97	.68
Army duck, 37", 13 oz., yd.	1.445	1.405	1.480
Blended printcloth, 64", 78x54, yd.	.97	.90	.80
20s combed yarns	1.82	1.77	2.05
Wool 64s, Staple, lb.	2.70	2.55	1.95
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	105.00	105.00	100.00
Benzene, petroleum, tanks, Houston, gal.	2.52	1.55	.740
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.315	.285	.325
Polypropylene, homopolymer grade (market price), lb.	.370	.350	.345
Polystyrene, general purpose grade (market price), lb.	.47	.42	.32
Polyvinyl chloride, pipe grade (market price), lb.	.325	.315	.285
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.42	.38	.21
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	145.00	152.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.77	.73
Xylene tanks, gal.	.850	.795	1.360
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	325.51	328.05	326.40
Lumber 2x2 pine, mbf, cl	324.56	327.84	323.60
Plywood, plyform, ¾", msf, cl	577.50	575.00	598.70
Plywood, ⅝", msf, cl	382.00	378.60	389.40
Cement, bulk, ton, tl	63.50	63.66	65.69
Sand, ton, cl	7.14	6.72	6.57
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.53	48.43	47.45
Crushed stone, 1½", ton, cl	8.06	8.18	7.98
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.89	0.84	0.83
Gypsum sheathing, ½"x1"x8", msf, tl	215.25	206.94	217.87
Brick, common, per thousand, tl	186.67	187.35	186.91
Asphalt paving, AC-20	125.02	128.04	162.69
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.08	7.13	7.07
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	17.25	16.25	8.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.50	19.50	14.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.570	.555	.603
Gasoline, 94 oct., reg., Chi., tank car, gal.	.548	.538	.545
Heating oil, No. 2, Chi., bulk, gal.	.518	.501	.453
Heating oil, No. 2, N.Y., bulk, gal.	.510	.490	.483
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal	.500	.453	.420
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.290
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	80.00	77.00	71.00
Steel, No. 1 hvy., dlvd., Chi., ton	73.00	71.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.625	.575	.580
Copper, No. 2, East, wholesale buy, dlvd., lb.	.545	.495	.505
Brass, red, East, wholesale buy, dlvd., lb.	.585	.535	545
Brass, yellow, East, wholesale buy, dlvd., lb.	.345	.330	.300
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.415	.385	.340
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.455	.420	.370
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.150
Lead, clean solids, East, wholesale buy, dlvd., lb.	.215	.155	.108
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	40.00	30.00	12.00
Paper, old corrug. box, dlr., N.Y., ton	15.00	25.00	12.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.10
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.20	.12

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Packaging

Farewell to the flats, prices going up

Robert S. Reichard, executive editor

It has been a relatively hectic few months on the packaging front—especially in corrugated where vendors have been posting hefty boosts. Add in more modest increases in other sectors (see price trend chart) and early 1987 looks a lot different from a year ago, when most prices were static or just inching ahead.

Packaging buyers, responding to a new nationwide ***PurchasingWorld*** survey, agree on this. They see continued, though more restrained, advances in the months immediately ahead.

Observes one Midwestern buyer, "It was unrealistic to expect the flat patterns of 1985 and early 1986 to continue. But I think we've seen the worst. Hikes from here on in should parallel general inflation, rising at a 3-4% annual rate this year and into early 1988."

The slowdown in the rate of price rise is already apparent in corrugated cartons which account for the biggest single slice of the packaging dollar. Tags, which shot up 11% in the past 12 months, may take a breather as 2Q plans for $30/ton boost in linerboard are pushed ahead.

Packaging price moderation is also suggested by the fact that 47% of the survey's respondents see smaller increases from now through year-end—three times as many as those who see further acceleration.

But whatever price advances, few would deny that it's affecting more and more packaging areas. Aside from the boosts in paper, there's upward pressure in plastics—as basic resin prices are well above late 1986 lows. Several buyers, for example, see near-term increases in plastic bags, foam, and stretch wraps.

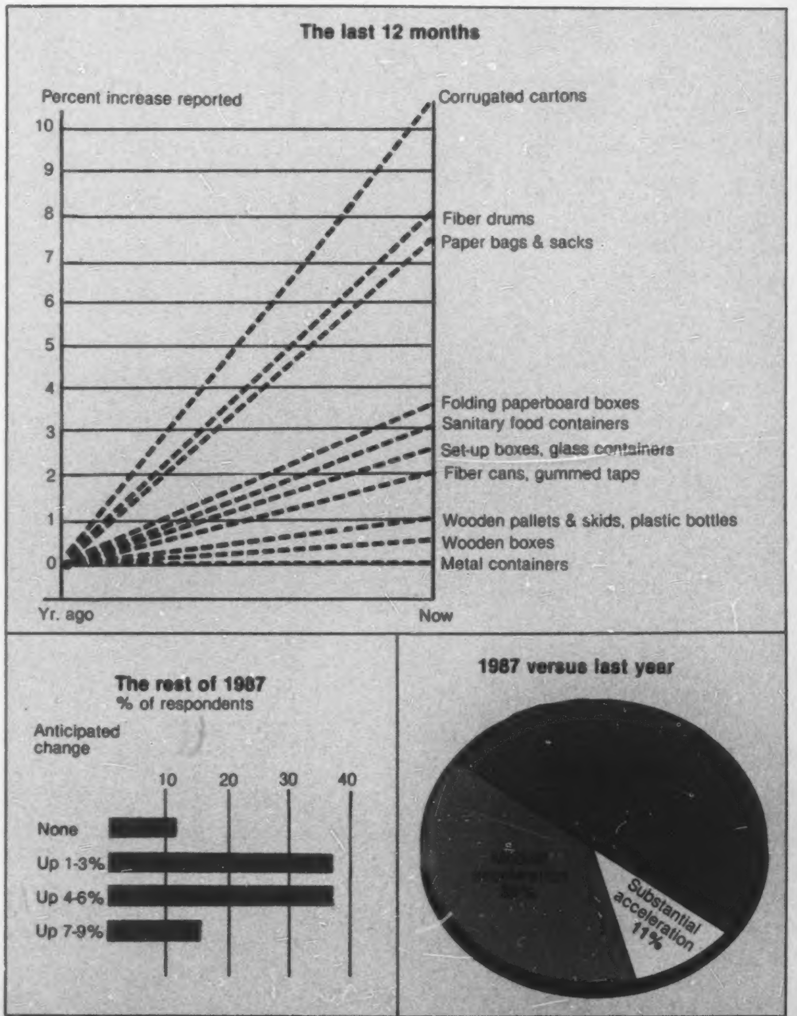
Metal can prices have failed to rise. However, it's hard to see how some upward pressure can be avoided, especially in aluminum, if the light metal (where basic ingot now runs more than 10¢/lb above late 1986) remains as strong as it is.

Demand continues brisk. More than 80% of ***PurchasingWorld*** survey respondents expect purchases of packaging materials to equal or top last year's levels. The average gain (4-6%) is also impressive.

This, in turn, has prompted a few PMs to talk about possible leadtime stretchouts. Several project slower deliveries in selected paper areas, and a few express concern about some plastic and glass items.

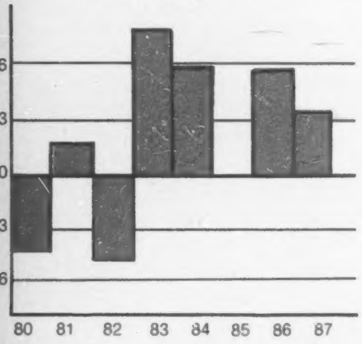
Even corrugated carton is in line for its share of improvements. One newly patented machine turns out boxes with a series of folds that allows a worker to open the box's sides and lock the bottom flaps into place simultaneously—without using staples, tape, or additional glue. Another benefit: Shippers can collapse the box and reuse it.

Metal packaging hasn't been sit-

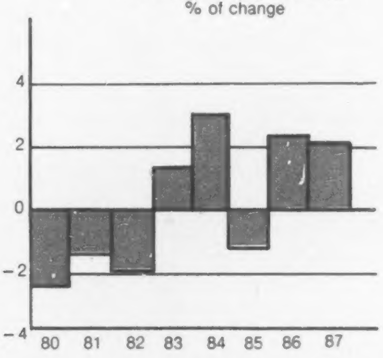


Source: Bureau of Labor Statistics, PurchasingWorld

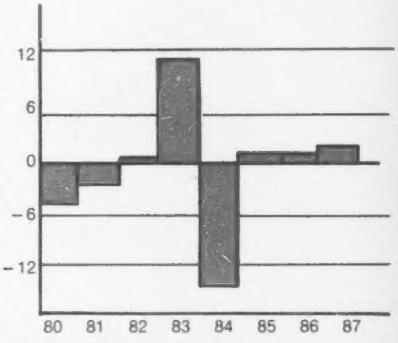
Corrugated demand
% of change



Folding boxes, demand
% of change



Set-up boxes, demand
% of change



ting still either: An aluminum food can line with commercial production is scheduled for next year. It could be a major attack on a market dominated by steel. The stakes are big—right now aluminum has only a 5% share of the food can market.

Thanks to all this competition for the packaging dollar, buyers continue to find new ways to cut costs—using such time-tested approaches as working with thinner gauge materials, redesigning, substituting, and standardizing.

Long-term contracts which limit price increases are gaining popularity, as are more single sourcing and consolidation—all aimed at increasing leverage. Insistence on buyer/vendor cooperation—the kind that can lead to product improvement and ultimately lower packaging costs—is increasing.

Here's a more detailed rundown on individual packaging lines for both 1987 and beyond.

■ **Corrugated cartons:** Further modest gains loom ahead for this product which last accounted for about one-fifth of the packaging industry's estimated $64 billion volume. Best bet now is a 292 billion square-foot shipment year—about 3% above 1986 levels—though not nearly as big a gain as in 1985, when shipments rose by nearly 6%.

Modest average annual advances of about 2.5% are projected for 1987-1991. As for competition, while the industry has lost some volume to heavy-duty, flexible plastic shrink and stretch film, and rigid plastic containers, it continues to gain share from wooden containers and metal drums.

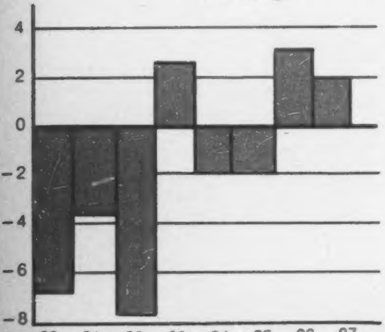
Near-term price trends, meanwhile, will continue to depend on linerboard tags. The proposed $380/ton linerboard quote (up $30/ton from 1Q levels) should take hold—and that may mean another fair-sized boost in box prices before yearend.

■ **Folding boxes:** Figure on a 2% rise in real demand this year—with totals approaching the three million-ton level. Much of the advance is predicated on continued gains in the food and beverage sector. Prices should continue to climb—although probably not as fast as in the past 12 months.

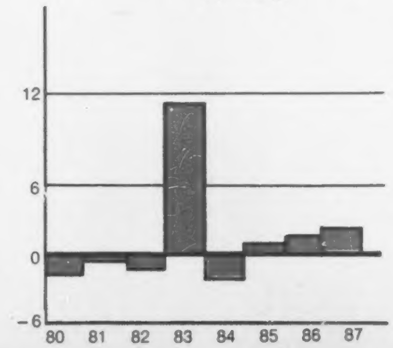
Long-term demand (1987-1991) will probably average 1.5% a year—with the upward impetus coming from a combination of slow growth in consumer durable markets (especially food) and a gradual rise in consumer incomes. Suppliers are expected to continue emphasizing product design and graphics, tamper-resistant technology, and productivity.

■ **Set-up paperboard boxes:** Look for 2% real growth for 1987. While hardly earthshaking, it's an improvement over the declines of the past decade when imports hurt markets for both textile and footware products. New technology has enabled suppliers to expand in com-

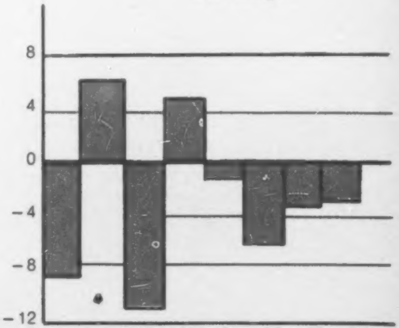
Sanitary food containers
% of change



Paper bags & flexible packaging
% of change



Composite filler containers
% of change



puter software, video equipment, chemical, drug, and other markets.

Prices should continue to rise at a 2-3% annual rate to yearend. As for long-term demand, growth should hold in the 1.5% range—despite increased competition from plastics—and should retain most of its market share.

- **Sanitary food containers:** Real demand will advance 2% for the second straight year in contrast to the declines of previous years. Credit the gain to increasing consumer interest in convenience foods—including aseptic food containers (a 2.5 million unit market last year). Prices have also been relatively firm—rising about 3% over the past 12 months.

Annual demand advances of 2% are projected for 1988 and beyond. Aseptics will be the growth leader—with growing competition from 1) barrier plastics (coextruded, multilayer, plastic containers which extend nonrefrigerated shelf life), and 2) retortable, flexible, plastic food-filled bags which also extend nonrefrigerated shelf life. Plastics will also play an increasing role in the construction of the aseptic package.

- **Bags and flexible packaging:** A slight acceleration in demand (2.5%) is anticipated this year. Plastics will continue to gain market share in the bag and sack market—accounting for almost 30% of total shipments. Paper bag prices have jumped a hefty 7.5% over the past 12 months.

Plastic inroads should continue beyond 1987. By 1991, synthetics should have half the grocery bag and sack market. Plastic shrink and stretch film (for bundling palletized loads) will grow far faster than the overall bag and flexible packaging market.

- **Fiber cans and drums:** 1987 should mark the fourth successive year of declines as real shipments fall 3% because plastic is taking fiber's place in the can sector.

This should level off to a 1% annual gain over the next four years as losses in motor oil and frozen juice cans taper off and gains are posted in such sectors as pet food, snack food, powdered drinks and frozen food. Fiber drums should continue to do well, and moderate real growth is seen for tubes, cores, and similar fiber products.

- **Metal cans:** Look for slow demand growth, with little upward price pressure, this year. The industry should ship only 107 billion units in 1987, resulting in less than a 2% gain over 1986. While prices may go up over the next few quarters, the overall 1987 tag should only jump 2%.

Some increase in the rate of price rise is seen for 1988 and 1989, when gains are likely to average 3-4%. Long-term demand should decelerate to about 1% annual gain for 1988-1991. Even so, metal cans will continue to account for the biggest share of the rigid container (metal, glass, and plastics) market—more than 3 out of every 5 units.

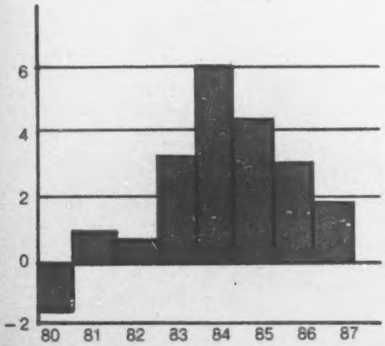
- **Glass containers:** A seventh straight year of demand decline will push shipments down to the 268 million gross level. But the drop will be a lot less than the 3.1% average drop of the past 6 years. Reason: Stronger demand for wine coolers, new glass-packaged foods for microwave ovens, and new fruit-flavored soft drinks. Prices will continue to go up about 3% in 1987—reflecting recently reduced capacity and higher operating rates.

There should be fair-sized price increases of about 4% next year. Long-term demand should continue to slip. More losses will occur in the beer market as more packagers turn to aluminum. Also bearish for the industry: the expected erosion of the 16-ounce soft drink bottle, as more of this big market shifts to plastic.

- **Plastic bottles:** This remains the big growth area in packaging, with a 7%+ unit gain after 9% gains for 1985 and 1986. Biggest increase (17%) will again be in the PET soft drink area. Prices should begin to rise a bit faster as resin tags move up. Some buyers already report 3-5% bottle increases.

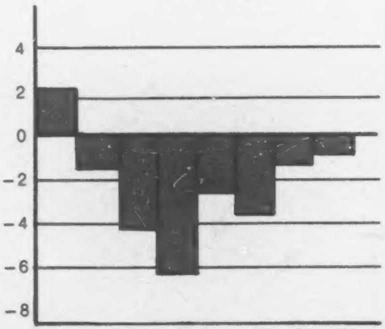
The long-term demand picture also remains bullish—though saturation could limit gains in the household chemical, toiletries, cosmetic, and drug areas. But PET bottles seem to be headed for more gains—especially in the 16-ounce soft drink area where 25% yearly advances are projected. PVC, now approved for food packaging, could also show gains in edible oil and water bottling markets. Plastic bottles, as a whole, could advance about 6-7% annually for at least 5 years. **PW**

Metal cans
% of change

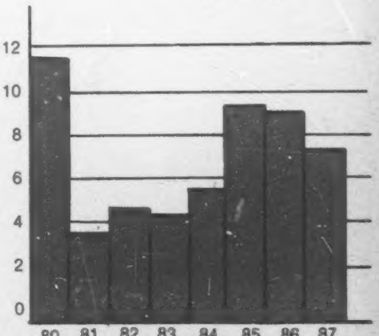


Source: Commerce Dept.

Glass containers
% of change



Plastic bottles
% of change

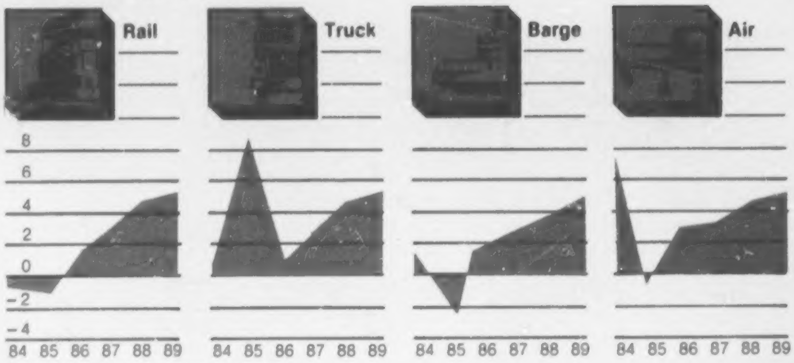


Wharton transportation report

Rates look great for 1987

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

Strong competitive pressures will continue to hold down near-term freight rate boosts, according to Wharton Econometrics' most recent transportation report. Wharton's analysts now project a 2.4% overall increase for 1987 vs. the 2.5% estimate they made three months ago. That's still under the general inflation rate and a rise of only 1% from 1986.

Factors behind this optimism are relatively small demand gains, lingering excess capacity, and manageable cost increases. But this could change next year as demand edges up (GNP should grow 3.3% in 1988 vs. 2.5% in 1987) and costs (especially energy) begin to rise faster. Result: Overall freight tabs could rise 4.2% in 1988 and jump again to 4.9% in 1989.

But all this should be viewed in perspective. Wharton sees industrial producer tags advancing 4.5% and 5.2% in 1988 and 1989. Implication: Freight rate boosts will be modest in terms of the overall price climate. Individual modes shape up as follows:

- **Trucking:** The smallest rate increases—at least for 1987—are expected in this sector. Much of the moderation is due to widespread discounting, "the fiercest since the industry was deregulated in 1980," according to one carrier. Other downward pressures stem from improved efficiency, low fuel costs, and continued productivity gains.

Truck rate increases should be held to 2.2% this year after a 1.0% rise in 1986. With fuel and demand heating up, price hikes could accelerate to 4.2% in 1988 and to 5% by 1989.

- **Rail:** Demand, relatively static in 1986, eased a bit early this year. While the losses are likely to be made up, no appreciable advance is seen for 1987. The industry's big volume customers—steel, ores, lumber, and coal—show only modest growth.

Intermodal is expected to be the strongest sector. This means continued moderation in prices due to competition with low-cost and nonunion trucking. Price hikes should average 2.8% in 1987, but rising input costs and brisker demand will push prices up 4.3% and 5.0% in 1988 and 1989.

- **Water:** The barge industry still suffers from overcapacity which has spawned discounting and a net decline in rates since 1982. But this is being corrected as operators scrap units and reduce the barge surplus. Another factor holding prices has been our trade deficit, making it difficult for ocean ships to find loads for their return trips abroad. This is changing as the decline in the dollar begins to help exports.

Water rates should increase 2.3% this year, following a 1.6% advance in 1986. But these rate boosts will be among the lowest in transportation—accelerating to only 3.7% and 4.4% in 1988 and 1989.

- **Air:** Last year, both the passenger and freight sectors were up significantly. But price increases averaged only 2.7% as lower oil prices reduced cost pressures and active competition (prodded by merger and acquisition activity) provided a fertile environment for price wars.

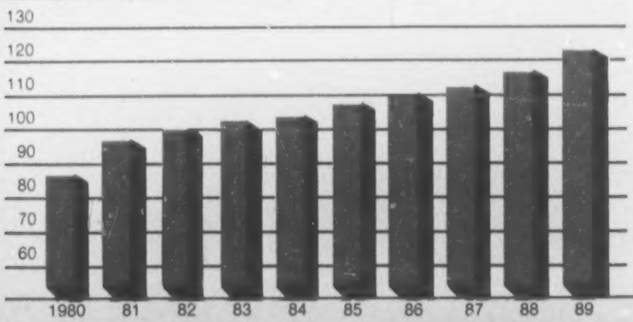
Air freight demand remains healthy, with volume up 4.5% over the first two months. But competitive pressures will allow only a slight acceleration in prices this year (to 3.0%). In 1988 and 1989, when fuel and other costs begin to rise, rates will jump 4.4% and 5.0%.

One change worth noting: CF AirFreight's decision to drop its overnight cargo-passenger deal with Eastern in favor of building its own fleet. This could mean more competitive pressures.

Also indicative of a competitive situation is a Federal Express move to cut tags 7% on overnight deliveries. Big customers are consolidating services with one primary carrier to get bigger discounts. **PW**

PurchasingWorld freight rate index

(1982 = 100)



	Increase over previous year
1980	14.9%
1981	11.0%
1982	2.0%
1983	3.0%
1984	0.5%
1985	4.8%
1986	1.4%
1987	2.4%*
1988	4.2%*
1989	4.9%*

* Estimated

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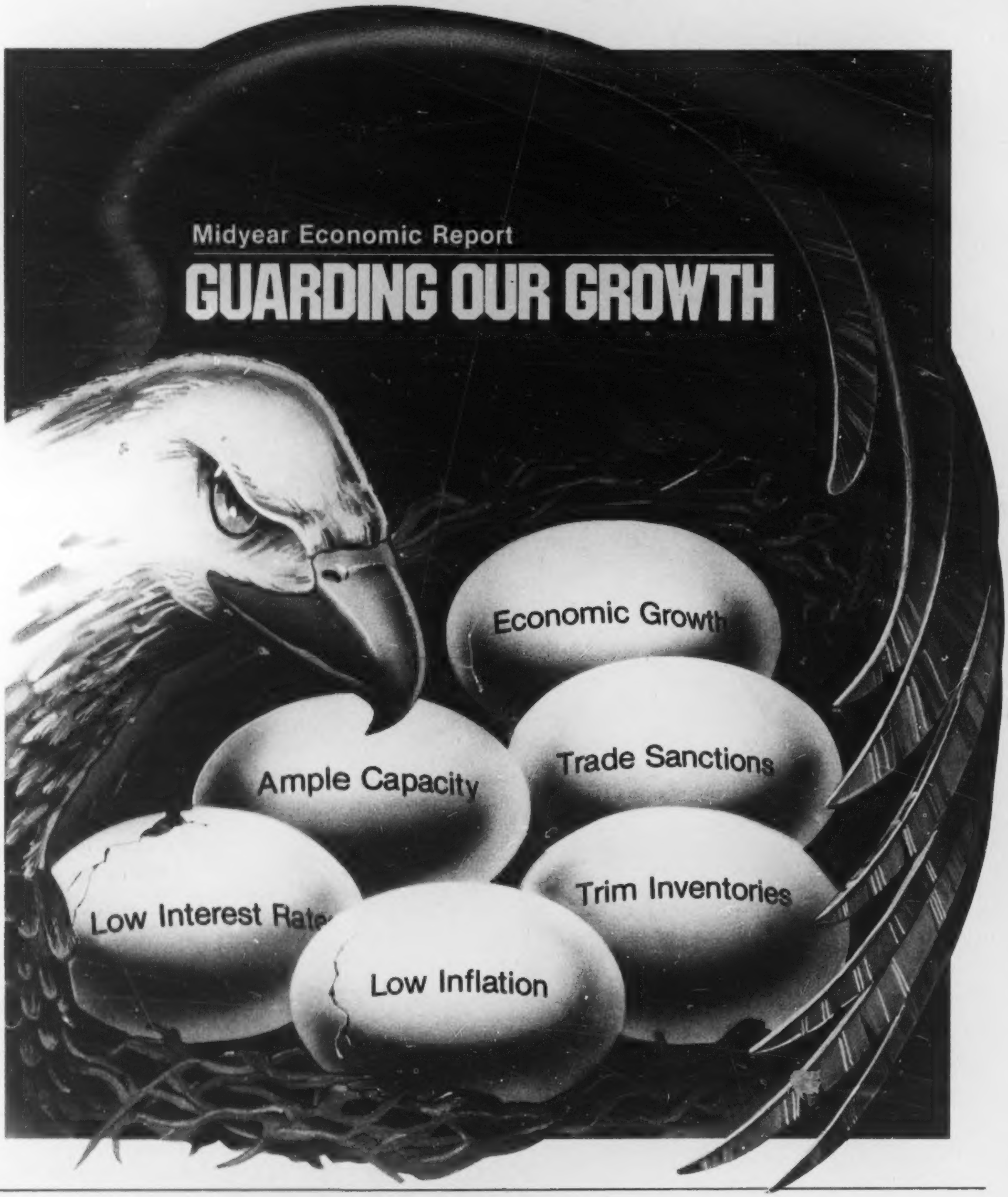
PurchasingWorld®

CHASINGWORLD VOL. 31, NO. 7 JULY 1987


Economic Growth
Ample Capacity
Trade Sanctions
Low Interest Rate
Trim Inventories
Low Inflation

Midyear Economic Report

GUARDING OUR GROWTH

Getting top management behind purchasing

RPS: where the bar code meets the road

How PMs are going international

PurchasingWorld®
Helping you manage the business of buying
July 1987 Vol. 31 No. 7

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Keep up the good work
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You're #1
GO

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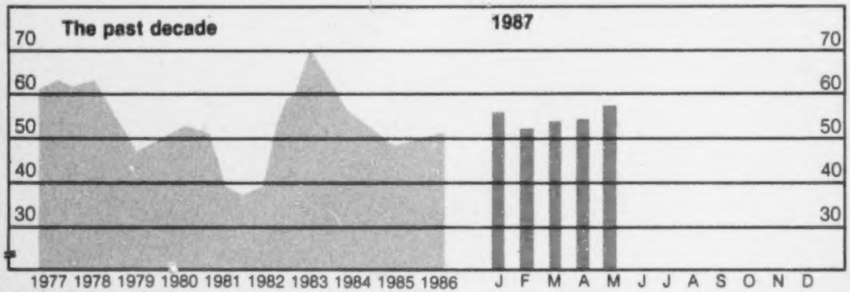
BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Signs say slow growth

The cautious optimism suggested in *Purchasing-World*'s midyear forecast in this issue is substantiated by the latest batch of leading indicators.

Perhaps the most encouraging sign is the continuing strength in the N.A.P.M. Business Barometer. A modest advance here has brought this bellwether yardstick of near-term activity to its highest level in months. N.A.P.M. committee chairman Robert Bretz observes that if this pattern continues, 1987 real GNP growth could be near 3.2%.

Also supporting the theory that continued modest gains lie ahead is the apparent turnaround in foreign trade. In the six month period ending 1Q 1987 the physical volume of exports jumped 5% while imports were easing 1%.

Business leaders also see better days ahead. A new Conference Board survey shows a rise in corporate confidence. Looking ahead to summer and early fall, 36% of the survey respondents expect improved conditions vs. the 21% who feel some near-term lull may be in the cards.

Two other pluses: 1) interest rates seem to be topping out after their recent rise, and 2) inventories are still lean.

Industrial distributor sales have also been climbing since the beginning of the year, indicating that production managers are getting ready for some factory gains over the next few months.

Much less encouraging has been the slowdown in consumer buying. Car sales, for example, averaged less than 10 million units at an annual rate over the past month.

The recent easing off in housing permits (see chart) also points to some problems. Note that this lead indicator of future housing starts has been falling since January.

This same analyst also points out that other forms of construction are holding up fairly well—as witnessed by the overall contract award index which remains modestly above the levels of late 1986 and early 1987.

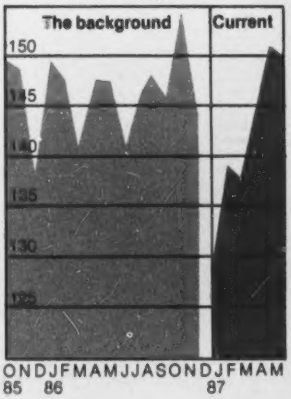
Also on a hopeful note is the turnaround in capital goods orders (see chart). Figures are still far from robust, but there's increasing hope that current changes could be the start of an upward trend.

One reason is the modest increase in corporate cash flow. Internally generated funds are covering 80% of proposed plant and equipment outlays. Then, too, the turnaround in trade alluded to above, by increasing demand, could also generate new investment interest.

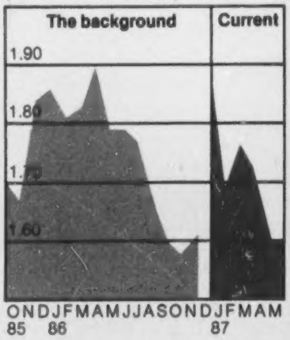
Although such increases in demand won't push factory operating rates much above 80%, the motive to modernize

Leading indicators

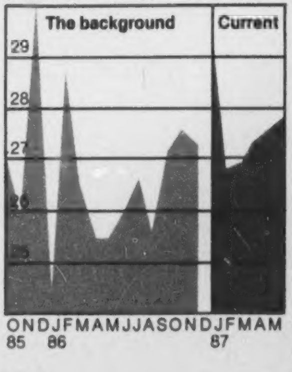
1. Industrial distributor sales
(index: 1977 = 100)



2. Housing permits
(mil. of units, seas. adj. annual rate)



3. Capital goods orders
(bil. of $, seas. adj.)



remains strong.

The nation's top corporate executives confirm this thinking. They are talking about a 3% real increase in capital outlays this year—in contrast to the 3% decline expected just three months ago.

That's not to say that a new capital spending boom is in the making. Far from it. But the turnaround, if it materializes, should keep the economy in the plus column. Equally encouraging is the boost to U.S. competitiveness that this renewed investment implies.

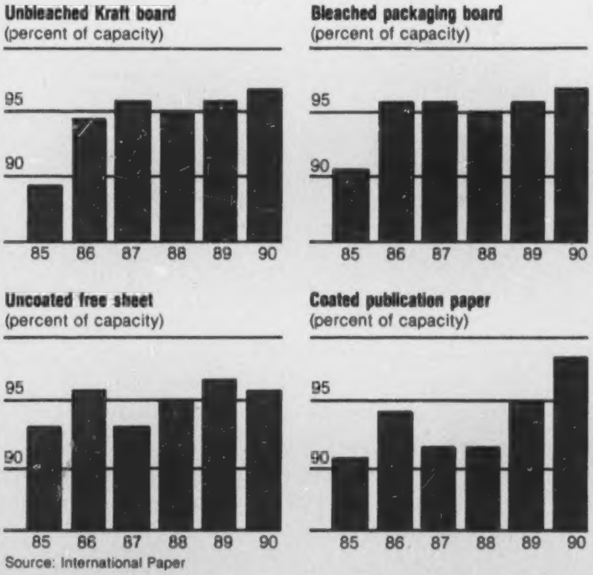
No wrinkles in paper

Figure on good supply-demand balance in the paper industry—not only for 1987 but also for 1988 and 1989.

That's how top executives at International Paper (IP) see the market. Product-by-product operating rates (as supplied by the company) are summarized in the accompanying table. IP also gives these specific comments:

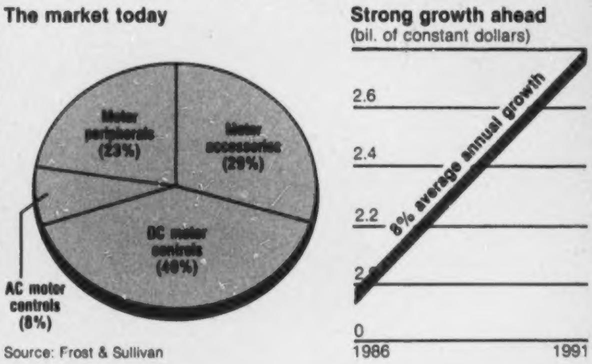
- **Unbleached kraft board:** U.S. consumption should increase about 2.5% this year and slightly less in 1988. Operating rates should hold in the mid-to-high 70s as the decline of the dollar keeps export markets fairly strong.
- **Bleached packaging board:** A strong export market will keep U.S. utilization rates at almost full capacity through the end of the decade. Between 1986 and 1990, the industry will gain the incremental capacity necessary to meet demand through rebuilds and productivity improvements.
- **Kraft papers:** Strength in linerboard markets will continue to reduce kraft paper capacity on those machines that can run lightweight linerboard more profitably. This trend, together with machine shutdowns, has kept operating rates high—and will continue to do so.
- **Uncoated free sheet:** Much of the strong demand in this market is related to computer use which has led to particularly strong growth in the reprographics and forms bond market segments. Operating rates should remain in the 90s.
- **Coated publications papers:** Operating rates should improve as the erosion of the U.S. dollar in world money markets reduces the attractiveness of the American market to foreign producers and opens up foreign markets to U.S. producers.

Paper operating rates into 1990



Source: International Paper

Motor controls, accessories & peripherals



Source: Frost & Sullivan

Motor controls growing out of control?

The motor controls, accessories, and peripherals market is poised for some relatively large gains.

A new Frost & Sullivan study suggests that sales, which hit $1.9 billion last year, could hit $2.8 billion in constant dollar terms by 1991. That's the equivalent of an 8% annual rate of growth.

Included in the report is everything from the precise positioners in computer disk drives to factory lathe clutches. Coverage includes AC and DC motor adjustable-speed controls, servomotor and positioner motor controls, accessories such as tachometers and resolvers, and peripherals such as clutches, brakes, belts, gears, and hydraulics.

The biggest sector—DC motors, where sales hit $770 million last year—should post a 10%+ growth rate. This will be fueled by positioner and servomotor controls rather than the traditional adjustable-speed controls.

AC motor controls ($160 million in 1986) have carved out a significant niche in large horsepower motors. But with factory equipment designed for them predominantly produced in 1984-86, strong growth here will have to wait for another spending cycle—probably at the end of the current decade.

Encoders, used with digital-based control systems, are the outstanding accessory product (54% of the market last year). Though they will remain the largest accessory segment, resolvers (which provide precise position information for servomotors and position controls) will grow faster—doubling in volume over the next five years.

Finally, in motor peripherals, the reliability and low cost of items such as hydraulic drives insures continued use. And clutches and brakes have benefitted from installation as safety devices on production machinery.

CURRENT PRICES

Summertime and the price boosts are easy

The lingering impact of the early 1987 price advance continues to nudge industrial price averages upward. But the overall increase is slowing down. Only a 0.4% boost was racked up over the last month—less than 5% at annual rate.

Also indicative of a slackening off: the considerable number of "declines" and "no changes" noted in ***Purchasing-World***'s detailed monthly breakdown. This past month more than half of the 50 regularly monitored items sported steady or lower prices.

Particularly encouraging is the fact that many semifinished and finished items are down or level. Included are bearings, glass containers, cutting and power driven hand tools, fasteners, bulbs, scales, and internal combustion engines.

The energy sector continues to advance. Gains are reported for home heating oil, residual fuel, diesel fuel, LPG, coke oven products, and gasoline. But the latter (up 0.9%) is deceptive because prices normally rise at this time of year. Upshot: Gasoline declined on a seasonally-adjusted basis.

Capital equipment increases were also lower this month. Boosts that were posted in office and store machinery, construction equipment, and textile machinery were partially offset by declines in material handling equipment, farm equipment, and mining machinery.

On the other hand, chemicals—led by organics—rose considerably. This, in turn, created substantial upward pressure in commodity plastics. Yet even in chemicals, there were some exceptions to the rise, notably in fertilizer and synthetic fibers.

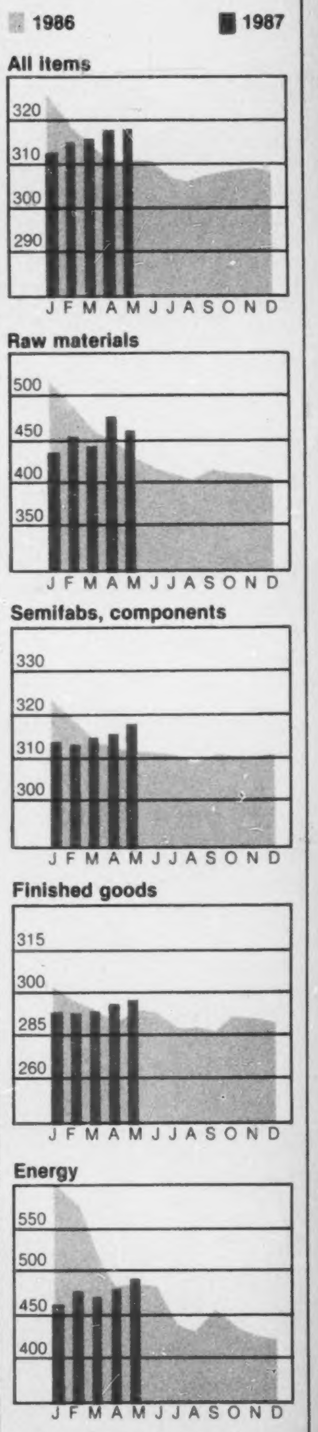
An upward tilt was also

This month's breakdown

	Latest level (May)	% change from: Month ago	Year ago
Bearings	355.2	−0.8	−0.2
Bolts, nuts, etc.	278.0	0.0	0.4
Chemicals, inorganic	290.9	−0.2	−1.9
Chemicals, organic	353.0	1.9	8.7
Concrete products	225.4	−0.1	−0.3
Corrugated cartons	294.1	0.0	11.5
Cutting tools, small	293.0	−0.4	0.5
Electric lamps (bulbs)	347.3	−0.1	0.1
Electronic components	202.3	0.0	0.8
Fans and blowers	370.6	−0.2	−0.7
Foundry and forge products	364.1	0.1	−0.1
Fuel oil (residual)	639.9	4.1	34.0
Furniture, commercial	326.5	0.1	3.1
Gasoline	392.4	0.9	3.6
Glass, flat	236.5	−0.6	2.5
Glass containers	397.3	−1.6	−0.5
Gypsum products	334.4	3.1	−7.2
Hand tools	394.4	0.3	3.1
Hand tools, power driven	242.1	−0.2	2.3
Industrial furnaces	402.3	−0.1	2.0
Integrating and measuring instruments	240.7	0.3	2.3
Internal combustion engines	358.9	0.0	1.8
Lubricating oil	351.5	1.5	−6.8
Lumber millwork	328.1	0.5	3.6
Material handling equipment	297.9	−0.5	0.5
Metal containers	360.0	−0.2	−0.4
Metal mill shapes (nonferrous)	308.7	1.0	2.8
Metal tanks	299.1	−0.6	−1.1
Motors and generators	355.2	0.1	1.2
Motor trucks	321.7	−0.6	3.4
Office and store equipment	158.6	0.7	2.7
Paperboard	296.2	0.1	10.1
Paper boxes and shipping containers	285.5	0.2	7.2
Paper office supplies	243.1	−0.4	1.7
Paint	283.4	0.2	2.8
Plastic resins	304.5	1.0	3.0
Precision measuring tools	272.5	0.0	2.1
Pumps and compressors	365.5	0.1	1.4
Refractories	370.5	−0.2	−0.5
Rubber belts and belting	332.8	−1.5	−0.5
Scales and balances	234.0	0.0	1.3
Steel products	352.4	0.1	1.4
Switchgear	291.1	0.1	1.5
Textiles, synthetic fibers	147.1	−0.3	−1.7
Textiles, gray fabrics	153.6	0.3	1.7
Tires and tubes	231.0	−0.5	−1.7
Transformers and power regulators	236.9	0.3	1.7
Welding equipment	303.9	0.0	1.2
Wire and cable	206.3	1.3	−0.2

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics

noted in construction materials as nonferrous wire and cable, metal valves, plastic construction materials, gypsum products, and lumber millwork all contributed to a 0.4% overal increase over the past 30 days.

But the biggest jump of the month came in nonferrous metals which showed the biggest advance since January 1980.

One government spokesman feels these metal boosts may be ready to top out on a combination of sufficient global capacity and level near-term demand—factors which could even bring modest declines in the next few months.

STEEL SCENE

Foreign steel costlier, harder to find

Foreign steel buys are harder to find these days, according to *Purchasing World*'s latest monthly survey of the nation's top service centers and metal buyers. Only 23% of those buyers now say overseas mills offer lower tags—the lowest such reading in years. More significant, all 23% add that the savings are modest.

Distributors responding to the latest Steel Service Center Institute survey also indicate moderate price breaks. In the carbon steel sector, only 18% say foreign quotes are cheaper—vs. 45% in 1986—again, the lowest figure in years.

The narrowing of the import price advantage to service centers is equally apparent in stainless steel where the 54% citing price advantages compares to the 100% 12 months ago. Also for the first time in years, no one puts the savings in stainless in excess of 10%.

Several reasons are suggested for the fading overseas advantage: the weaker dollar, which has forced foreign mills to boost their quotes to U.S. buyers, and U.S. trade quotas and anti-dumping moves.

All indications are that these trends will continue. Only 10% of queried steel buyers now say they plan on increasing their dependency on foreign metal over the next six months.

This trend is further confirmed by actions of overseas sellers themselves. At latest report, 54% of surveyed American buyers felt that foreign competitors were now less aggressive in seeking domestic business. Not one overseas mill was categorized as being more active.

Less foreign competition isn't the only indication of a firming steel

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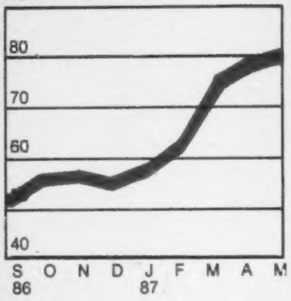
BUSINESS DATATRAK

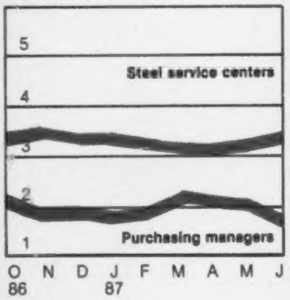
Steel

Operating rates



Inventories

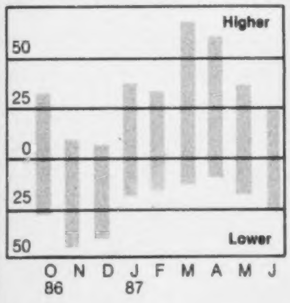
(Months supply on hand)



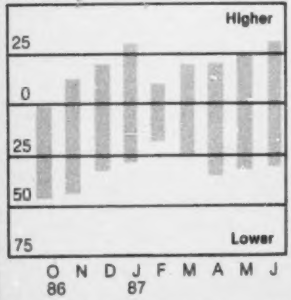
Demand

(Percent of respondents)

Service centers incoming orders



Steel buyer



market. Further confirmation comes from service centers which now seem reconciled to paying higher prices for their steel over the next six months. Specifically, 77% expect to be paying more—and 10% put the projected increase at more than 5%.

These current and future hikes in replacement steel costs could cause some pass-along trouble for service centers. As Andrew G. Sharkey, SSCI president, put it, centers with fixed automotive contracts are being hard pressed to maintain profitability as buying prices rise and selling prices are locked in by long-term contracts.

Another interesting finding coming out of the latest buyer and distributor surveys: Both groups expect a leveling off in steel demand. On the buyer front, the 33% who expect to increase their intake of steel over the next three months is virtually offset by another 30% who anticipate declining receipts over this period. This is the first time since last November that increases haven't predominated. This could be one reason why another survey taken at SSCI's annual meeting is calling for only a 72-million-ton steel shipment year—a figure that suggests a flat second half.

Even with this leveling off, buyers remain concerned about availability. Only about half of those queried think they'll be home free in coming months. Major worries center around coated, cold-rolled, and hot-rolled sheet.

This could be a reflection of the current situation rather than what will be happening. It's hard to see any further tightening in view of 1) increasing domestic production, 2) a low industry operating rate, and 3) a possible summer weakening in autos and construction.

Import prices

(Compared to domestic)

Steel buyers

ABOVE 13%
SAME 64%
SLIGHTLY BELOW 23%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 11%
SAME 71%
5-10% BELOW 14%
10-20% BELOW 2%
OVER 20% BELOW 2%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

PROCUREMENT STATUS

Minimal wait gains

Some problems persist, especially in steel, where sheet and plate are snug in some areas of the country, and in chemicals such as styrene.

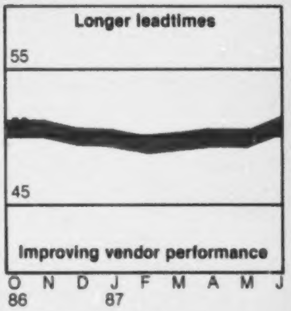
All this is showing up in *Purchasing World*'s leadtime index which edged above the neutral 50 mark to 51 for the third consecutive month. But the small imbalance suggests only fractional deterioration in the overall procurement climate.

A closer look at the index itself is also reassuring. While a few items have stretched, the majority of the 150 items monitored on a regular basis

Monthly procurement status report

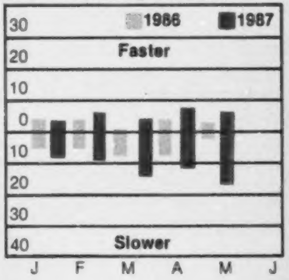
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



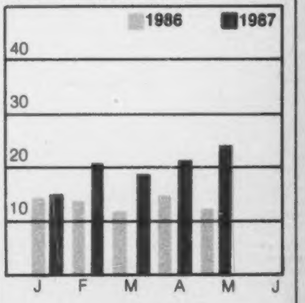
Delivery performance

(Percent reporting deliveries)



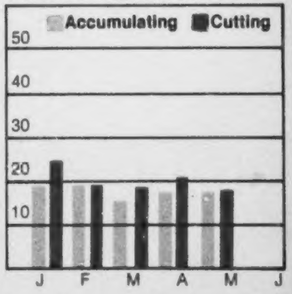
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

has remained unchanged from January levels.

The same pattern is indicated by the latest N.A.P.M. Business Committee survey on speed of delivery. Those reporting slowdowns outnumber those noting speedups. But 77% note little change from earlier levels.

For more reassurance, look at purchasing managers' strategies. At latest report, 52% were ordering production materials 30 days or less in advance vs. 54% two months earlier.

Also indicative of a "no-sweat" situation: Most PMs are keeping inventory holdings steady, despite slowly rising production schedules, rather than laying in a safety stock.

Why are industrial buyers confident? The few items that are snug today may not remain so. This is true of steel where demand is ready to level off. The tightness in petrochemicals will also fade as additional supplies come on stream.

The most encouraging sign is the relatively low overall factory utilization rate. Given projected capacity gains which are expected to offset a slow increase in production, operating rates should remain in the low 80% range.

As one PM sums it up, "It's still a buyers' market and it will remain that way into 1988."

Leadtimes and availability

Chicago: Delays in steel plate are now 12-15 weeks, structural is out to 4-6, and aluminum is out to 18-20 for coil and sheet, and to 12-16 for heat-treated and common alloy plate.

Cleveland: Weekly delays include: alloying materials (on demand), glassines and greaseproof papers (4-5), hardwood and softwood lumber and skids (1-3), corrugated cartons, folding boxes, and polyethylene and PVC resins (2-3), and 2-ply fiber drums (2).

Los Angeles: Weekly leads are: galvanized steel (12-14), aluminum tubing (4-6), grey iron castings (6-8), brass castings (8-10), pumps (10-12), domestic fasteners (7-9), foreign fasteners (16-18), stainless steel coil (14-16), standard bearings (20-24), standard valves (10-12).

Houston: Galvanized steel coils are in to 12 weeks. Paper and packaging are unchanged at 10-60 days. Holding steady (in months) are pumps (4-6), low voltage electric motors (3-6), stainless steel fasteners (1-3), structural steel (2-3), and boilers (5-11).

Philadelphia: Corrugated boxes have edged out to 4-5 weeks. Wooden pallets are out to 1-2 weeks. Holding steady (in weeks) are xerographic paper and towels and tissues (½), and multi-part printed forms (6-8).

Pittsburgh: Copper mill products are in to 4 weeks but zinc stays at 3. Most alloying materials are at 2 weeks. No sweat in steel strapping and plastic packaging (2-3), seals (1-2), polyethylene and PVC resins (5-6), drums (1), and corrugated boxes and lumber (3-4).

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BUSINESS DATATRAK

Leadtimes (in weeks)	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	11	8	10
Plate (Phil)	10	3½	3½
Plate (Chgo)	13½	9	4½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	11	4½
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	6½
Structurals (Chgo)	5	4½	4½
Structurals (Hous)	11	11	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	7	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	16
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

	Now	Month ago	Six months ago
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	2½
Plywood (Chgo)	3	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	19	13	11
Aluminum Plate (Chgo)	14	12	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	19	13	11
Brass Castings (LA)	9	9	9
Brass Rods (Chgo)	7½	7½	9
Brass Sheet (Chgo)	11	11	5
Brass Tube (Chgo)	13	13	7
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	4	6	6

	Now	Month ago	Six months ago
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	3	3	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	9
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	24	24	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	21	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	4	17
Welding Supplies (Hous)	5	5	5

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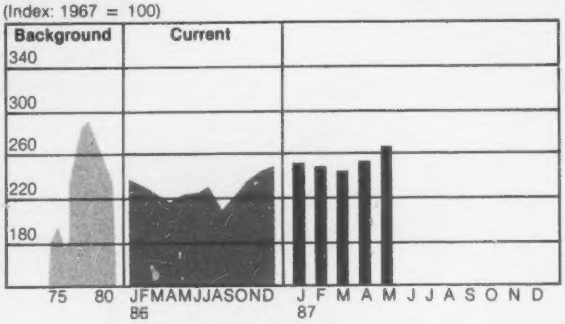
BUSINESS DATATRAK

Raw material price barometer

Latest month 269.7
Month before 253.6
Year ago 221.3

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	18.25	18.25	18.25
Steel, plates, H.R., Pitts., cwt.	18.25	18.25	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	26.90	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.700	.655	.585
Antimony, N.Y., dealer, lb.	1.18	1.15	1.32
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb.	1.37	1.33	1.32
Brass, yellow, [sheet], lb.	1.32	1.28	1.27
Cadmium, N.Y., dealer, lb.	1.60	1.20	1.05
Copper, electrolytic, wire bars, refd., lb.	.73	.69	.68
Copper sheet, over 24 in., lb.	1.46	1.42	1.41
Lead, common, N.Y., lb.	.350	.330	.205
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	310.00	310.00	244.00
Molybdenum, oxide, dealer, lb.	2.85	3.05	2.70
Nickel, cathode, dealer, lb.	2.17	1.92	1.93
Platinum, dealer, oz.	582.00	616.00	443.00
Silver, N.Y., oz.	7.82	8.81	5.47
Tin, N.Y., dealer, lb.	3.20	3.19	2.57
Zinc, Prime West, East St. Louis, lb.	.45	.45	.38
Zinc, die casting alloy, No. 3, lb.	.495	.465	.445
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.68	16.44	16.34
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	350.00	350.00	290.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.240	.241	.237
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.13	1.05
Cotton middling, 1", N.Y., lb.	.682	.630	.655
Printcloth, 48", 80x80, N.Y., spot. yd.	0.98	1.00	0.70
Army duck, 37", 13 oz., yd.	1.445	1.445	1.480
Blended printcloth, 64", 78x54, yd.	.94	.97	.80
20s combed yarns	1.88	1.82	2.05
Wool 64s, Staple, lb.	2.70	2.70	1.90

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	105.00	105.00	90.00
Benzene, petroleum, tanks, Houston, gal.	2.50	2.52	.820
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.28	.28	N.A.
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.27	.27	.27
Polyethylene resin, low density liner film grade (market place), lb.	.315	.315	.290
Polypropylene, homopolymer grade (market price), lb.	.390	.370	.340
Polystyrene, general purpose grade (market price), lb.	.48	.47	.31
Polyvinyl chloride, pipe grade (market price), lb.	.325	.325	.285
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.52	.42	.21
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	134.50	145.00	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.77	.73
Xylene tanks, gal.	.85	.85	1.36
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	325.60	325.51	328.65
Lumber 2x2 pine, mbf, cl	319.95	324.56	321.60
Plywood, plyform, ¾", msf, cl	577.85	577.50	595.65
Plywood, ⅝", msf, cl	381.60	382.00	387.55
Cement, bulk, ton, tl	63.50	63.50	66.70
Sand, ton, cl	7.14	7.14	6.60
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.00	48.53	47.82
Crushed stone, 1½", ton, cl	8.29	8.06	7.98
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.90	0.89	0.83
Gypsum sheathing, ½"x1"x8", msf, tl	227.00	215.25	217.52
Brick, common, per thousand, tl	192.82	186.67	184.96
Asphalt paving, AC-20	127.31	125.02	158.08
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.15	7.08	7.09
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	17.00	17.25	9.35
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.50	19.50	15.40
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.545	.570	.580
Gasoline, 94 oct., reg., Chi., tank car, gal.	.553	.548	.540
Heating oil, No. 2, Chi., bulk, gal.	.530	.518	.405
Heating oil, No. 2, N.Y., bulk, gal.	.510	.510	.395
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.510	.500	.360
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.270
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	83.00	80.00	70.00
Steel, No. 1 hvy., dlvd., Chi., ton	76.00	73.00	70.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.650	.625	.590
Copper, No. 2, East, wholesale buy, dlvd., lb.	.565	.545	.510
Brass, red, East, wholesale buy, dlvd., lb.	.610	.585	.550
Brass, yellow, East, wholesale buy, dlvd., lb.	.345	.345	.300
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.435	.415	.290
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.475	.455	.320
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.150
Lead, clean solids, East, wholesale buy, dlvd., lb.	.230	.215	.115
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	45.00	40.00	15.00
Paper, old corrug. box, dlr., N.Y., ton	25.00	15.00	12.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.120	.120	.095
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.11

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Midyear economic report:

our growth

This American eagle has something to guard. The United States is still the largest market for the world's goods.

The state of that economy is reflected in PurchasingWorld's midyear forecast.

- *In the opening article, Dr. Louis Paradiso points to specific indicators which show that the five-year-old recovery will continue.*
- *Supporting his view is a McGraw-Hill study of corporate executives which is positive, but cautions that prices will be rising a bit faster than before.*
- *A Data Resources Inc. (DRI) survey of product-by-product price trends puts price increases at 2.4% for 1987.*
- *Three top econometric models point to continued modest GNP growth.*
- *Buyers' outlook survey of PurchasingWorld readers says that, although 1987 is not a boom year, it will turn out pretty well.*

Compiled by Robert S. Reichard, executive editor

Attacking the twin deficits

Don't write off the nearly 5-year-old business recovery. Although things aren't booming, there are enough positive factors around to assure at least another 6-12 months of basic economic improvement.

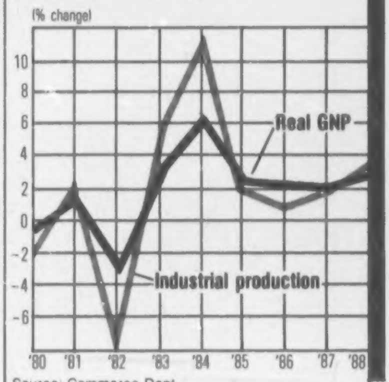
That's Dr. Louis J. Paradiso's midyear message to *PurchasingWorld*'s readers. The veteran economist feels that too much has been made of the federal and trade deficits. While not belittling them, he notes that there are some encouraging signs including trim inventories, relatively low interest rates, tolerable price advances, restrained pay hikes, ample capacity, and an unemployment rate of less than 6.5%.

According to Paradiso, these factors should be enough to guarantee continued growth. But he adds that it will be a modest growth—with GNP averages rising only 2-3% at annual rate over the next few quarters.

As far as inflation is concerned, Paradiso continues to downplay all the talk about a new spiral. "It would be unrealistic to expect a repeat of last year, when the combination of sagging oil and a flood of cheap imports made for stable or even lower tags. But on the other hand, price increases so far this year have been moderate—and there's nothing on the horizon to suggest any near-term change."

There are possible danger spots. A freefalling U. S. dollar, for example, would certainly hurt. So would any move toward all-out protectionism or consumer retrenchment. But odds of that happening are slim, says *PurchasingWorld*'s economic consultant.

Demand:
continued slow growth



Source: Commerce Dept., Federal Reserve Board., PW

Paradiso also points out that 1988 is an election year. If things turn soft, there will be increased government spending and easier money.

Similar to past years, gains will be relatively uneven. Again, the high-tech and service sectors will lead the advance. But for the first time in years, some of the smokestack industries will also show some improvement—on a combination of better management, anti-dumping moves, improved productivity, and a weaker U.S. dollar.

Most metal industries, for example, are moving into the black again. And many domestic machinery lines have become competitive as currency fluctuations help push foreign-made equipment up by as much as 15-20% over last year.

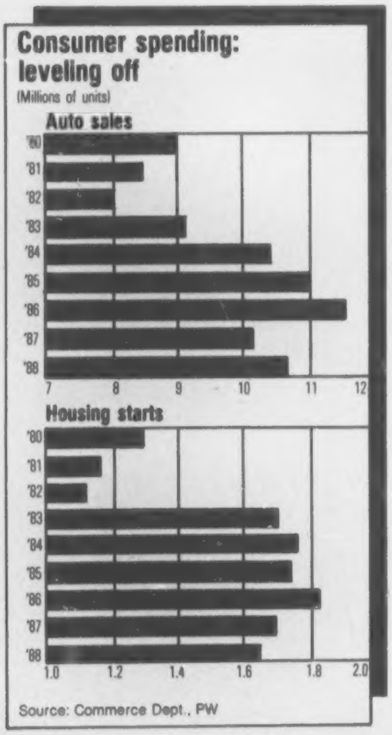
Midyear Economic Report

It's a time, says Paradiso, when PMs will have to be on their toes. Aside from changing U.S.-overseas price relationships, other areas requiring close monitoring will include inventories (as consumer demand becomes harder to pinpoint) and government moves (particularly in the international sphere).

But even with possible shifts, the broad near-term trend is becoming clearer. Major segments of the economy through early next year are expected to shape up along these lines:

■ **General economic growth:** Real gains won't show too much variation. The actual quarter-by-quarter projected advances at annual rate—3Q 1987, 2.5%; 4Q 1987, 3%; 1Q 1988, 3.3%; and 2Q 1988, 3.2%. For all of 1987 the advance will be near 2.5%—and much the same in 1988.

Industrial production will fare better—partly because some of the output lost to imports will be coming back to domestic producers in the months ahead. Next year's average gain is projected to be 3.3%, which represents a modest improvement over the miniscule 1% increase reported in 1986.



Consumer spending: leveling off

Source: Commerce Dept., PW

■ **Prices:** The modest acceleration alluded to earlier will change major inflation yardsticks. The all-inclusive GNP deflator, for example, should move up at a 4% annual rate over the rest of the year—and maybe approach a 4.5% pace by early 1988. That compares to a 2.6% average increase last year.

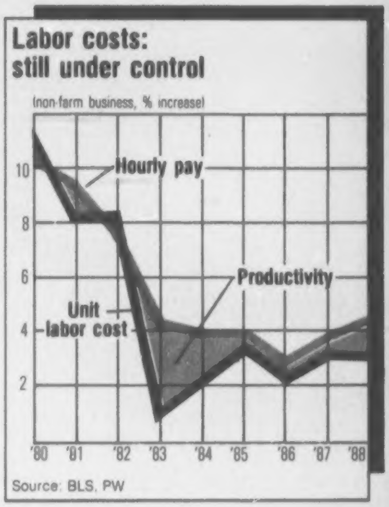
Somewhat faster acceleration is also seen for industrial producer prices where oil declines last year made for a surprising 3.6% decline. This year could bring a 2.7% increase—a swing of more than six percentage points. Even so, the advance (since it does not include services) would be less than anticipated for the GNP deflator. A slightly more robust 3.6% increase in industrial producer prices is projected for 1988.

Also reassuring is the fact that any additional production requirements in late 1987 and 1988 will be offset by new capacity coming on stream. Lest there be any doubt on this latter point, take a look at new McGraw-Hill capital spending projections (see page 51). They suggest that American industry will be shelling out $405 billion for new plant and equipment this year—probably enough to allow for a 2% increase in overall new potential.

■ **Profits:** Somewhat higher prices and volume will contribute to better bottom lines. After-tax earnings could reach $138 billion this year—up some $4 billion from last year.

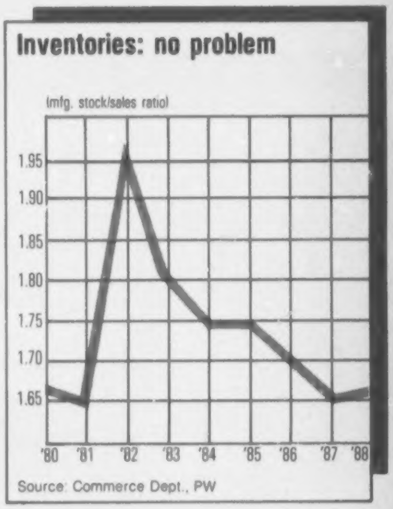
After-tax margins of all manufacturing firms should also be up slightly—hitting 4% in terms of sales vs. the 3.8% readings for 1985 and 1986. And while smokestack industries will continue to trail the all-industry average, overall figures in this sector should compare quite favorably with the levels of the past few years.

■ **Interest rates:** Recent advances have just about run their course. One reason: Any further significant increases would put a crimp in the



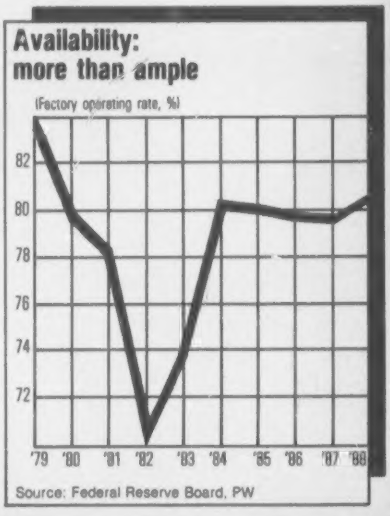
Labor costs: still under control

Source: BLS, PW



Inventories: no problem

Source: Commerce Dept., PW



Availability: more than ample

Source: Federal Reserve Board, PW

current business climate.

Best bet: The prime rate will remain around 8.25-8.5% through yearend. Even so, averages for 1987 as a whole are projected to be under 8%—below the average of 1986. The same goes for 3-month T-bills which should average out near 5.7% for all of 1987.

■ **Housing:** Mortgage rates have already risen in line with higher money costs. While advances have been modest (about 1%), they are already tending to put a ceiling on new housing starts, which will amount to about 1.7 million units in 1987 vs. 1.82 million in 1986.

■ **Consumer spending:** Again, nothing spectacular is anticipated. Aside from the drop-off in housing, there is little to indicate any significant strength in the crucial auto sector. Part of this reflects last year's big fall buying wave in response to industry incentives. Another factor could be already-high consumer debt.

Consumer prices, meantime, will probably follow the GNP price deflator trend since here, too, services are a major element. But with food tags expected to remain under control (up only 2-4% this year), the average 1987 gain in cost-of-living totals is estimated at only 4%. And for next year, the acceleration will be slight—to only 4.5%.

■ **Labor costs:** The prognosis is good here, primarily because union demands remain relatively subdued. As shown in the chart, pay hikes in the non-farm sector will be up only 1% in the 1987-88 period—to 4%.

Add in a 0.5-1% productivity offset, and unit labor costs will be up only 3-3.5% over the next 4-6 quarters—hardly enough to set off any new cost-push spiral. And in the crucial manufacturing area, the rise in unit labor costs will probably be even less, for factory productivity has been doing well, rising at least one percentage point above the overall non-farm business average over the past few years.

■ **Inventories:** While the aggregate volume of stocks is likely to rise a bit, it will only be in line with anticipated sales gains. The upshot is that stock/sales ratios will remain low. For all business holdings it will continue to back and fill in the 1.65-1.66 range through 1988. This is 15% under the 1.95 peak in 1982.

This has to be regarded as a positive sign. American industry is apparently not repeating the mistakes of earlier recoveries—adding more stock than justified by sales.

But another factor could be better management—with assists coming from just-in-time stocking techniques and computer controls. On the latter score, the electronic revolution now enables factory foremen to control the flow of production supplies—eliminating many of the miscalculations of previous business cycles.

■ **Capacity and new capital spending:** Projections for a continuing under-80% overall factory operating rate attest that there is more than enough production potential to go around. While some snugness has recently appeared in paper, plastics, and steel, this should be temporary.

In any case, auto sales should average out at only 10.2 million units this year—off substantially from the 11.6 million that sold in 1986. Some improvement (to 10.7 million units) is expected for 1988.

Overall consumer spending, however, should rack up a 2-2.5% gain in real terms this year as personal incomes rise a similar amount and the overall savings rate (savings as a percent of disposable income) drops to 3.5%, under the already-low 3.9% reading of last year.

■ **Foreign trade:** The dollar weakness is finally beginning to have some impact—at least on the export side, where outgoing shipments have tended to rise in recent months. And while dollar import totals are still climbing, this is solely due to higher import prices. The point to keep in mind: The physical volume of imports begins to show signs of peaking.

As such, this year's trade shortfall should drop to near $155 billion—off $15 billion from last year. And next year, another $20 billion decline is possible. Even so, that's still too high for comfort when you consider that as recently as 1983 the figure was only $69 billion.

■ **Federal budget:** Some modest improvement is also seen here. Right now, the feeling is that the total red ink figure should shrink to $175 billion when the dust finally settles on fiscal 1987—off some $45 billion from last year's horrendous level. Reasons: a combination of smaller outlay gains (as general revenue sharing ends and farm payments are pared down) and a fairly large 9% increase in total federal receipts.

And even more improvement (to $140-150 billion) is hoped for in fiscal 1988. Again, that's still extremely high—but enough of a gain to reassure foreign investors and governments that the U.S. is finally moving to get its house in order.

IT'S YOUR LAST CHANCE TO ENTER THE 1987 PURCHASINGWORLD CRYSTAL BALL FORECASTING COMPETITION

This forecast section may hold clues to help you win PW's Crystal Ball Forecasting Competition. The trick is to accurately forecast how the 1987 economy will perform in seven leading indicators—six months before the year ends!! Get out your personal crystal ball or lucky rabbit's foot and try your hand at predicting the future. You may even win a prize for your efforts.

Entry deadline is July 31, 1987. Entry form on page 106 of this issue.

Midyear Economic Report

Corporate eagles eye future gains

The nation's top business executives are making some midcourse adjustments to their overall 1987 projections.

In general, two patterns emerge: 1) Demand, while still expected to remain positive, will be somewhat less robust than originally envisioned, and 2) prices will rise a bit faster.

But the new findings—based on a just-completed McGraw-Hill survey—suggest an improvement in another key area: 1987 plant and equipment spending. As of now, respondents are planning on a 3.3% increase in current dollar terms. That's considerably better than the 0.4% increase anticipated by these same executives at the beginning of the year.

This capital spending figure doesn't look that bad even after correcting for inflation. Subtract the 3.3% increase in plant and equipment costs suggested by the survey and you still end up with a 1987 physical volume on a par with a year ago. Contrast that to six months ago when a 3% decline in real capital spending was anticipated and the improvement is clear.

Why the improvement? Most analysts attribute it not so much to a need for new capacity (the majority of firms is still operating well under preferred levels) but to the need to modernize and become competitive, especially against foreign suppliers.

The need to remain competitive also shows up in the modest price increases currently anticipated for 1987. There has been some slight acceleration in the durable goods sector. But the current estimated durable increase for the year (3.3%) isn't much above the 2.2% prediction made six months earlier.

Non-durable goods tags could actually decelerate—with the average gain for the year put at 4.8% vs. 5% previously. But there are a few exceptions. The paper and textile industries are expected to show price hikes above those previously anticipated.

The price outlook in non-manufacturing, meantime, also suggests some modest acceleration. The current estimated overall boost for the year is 3.3% compared to a 1.4% previous estimate. Here, too, there are a few sectors where deceleration is indicated. Only a 1.6% pickup in electric utility rates is now predicted. The overall (0.5%) advance in rail rates is also encouraging.

A less rosy note is the downward revision noted in 1987 demand projections. Biggest drops here are in durable goods where overall 1987 shipments in real terms are now expected to rise only 1.6%. That's a sharp slowdown from the 5.5% forecast made at the beginning of the year.

Nearly all of the durable goods industries are projected to share in the downgrading. Two exceptions are steel and nonferrous metals, where healthy 6.7% and 9.4% advances, respectively, are now seen for the current year.

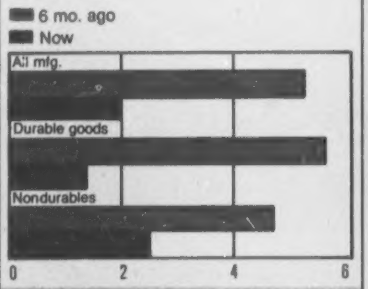
A similar downgrading is noted in the non-manufacturing sector where an earlier 4.7% estimated increase has given way to a 2.3% reading. The biggest deceleration is noted for textiles. An earlier 7.0% anticipated gain has dropped to 1.8%.

What does it all add up to? Businessmen are obviously a bit more cautious than they were at the beginning of the year. But by and large they still believe that 1987 will turn out to be a tolerably good year. And they are also giving some preliminary indications that they think 1988 will be the same.

Top managers take a second look at '87

Demand

Now vs. 6 months ago
(% increase)

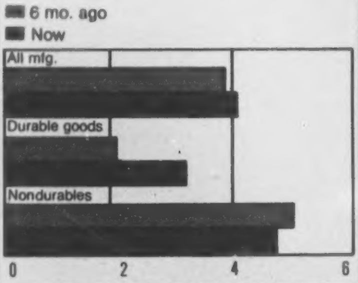


Latest industry estimates

Industry	% change 87/86
Iron & steel	6.7
Nonferrous metals	9.4
Electrical mchy.	1.8
Non-elec. mchy.	−3.1
Fabricated metals	6.7
Instruments	5.3
Stone, clay, glass	4.2
Chemicals	5.0
Paper & pulp	2.8
Rubber & plastic	9.7
Petroleum	0.6
Textiles	1.8
Mining	7.6
Electric utilities	0.3
Communications	5.2

Price

Now vs. 6 months ago
(% increase)



Latest industry estimates

Industry	% change 87/86
Iron & steel	−0.4
Nonferrous metals	2.2
Electrical mchy.	3.1
Non-elec. mchy.	2.5
Fabricated metals	0.5
Instruments	2.4
Stone, clay, glass	2.6
Chemicals	2.0
Paper & pulp	6.4
Rubber & plastic	2.4
Petroleum	4.0
Textiles	3.6
Mining	2.5
Electric utilities	1.6
Communications	−1.5

Source: McGraw-Hill

Midyear Economic Report

Economy still in flight

Industrial price boosts should remain in the moderate range—not only near-term but through 1988 and into 1989.

So say DRI analysts. Pore through the consulting firm's detailed table prepared especially for *Purchasing-World* readers, and it becomes clear that there could even be some deceleration in some product lines—if not next year, then certainly by 1989.

The projections can best be summarized by zeroing in on the big Lexington, MA-based company's overall industrial producer price forecast. After accelerating from a negative 3.6% figure last year to positive 2.4% and 3.7% readings in 1987 and 1988, respectively, a modest drop to 3.2% is envisioned for 1989.

Why the restrained advances? Much of it can be explained by continued unimpressive growth. GNP, for example, is expected to advance only 2.9% and 2.1% in 1988 and 1989. A similar lackluster pattern is seen for industrial production where the 1988 and 1989 gains will be 3.1% and 2.2%, respectively.

Another factor behind the continuing non-inflationary forecast could be the lack of any big wage increases. DRI's projections here for hourly production worker pay: 2.4% this year, 3.6% in 1988, and 3.8% in 1989.

Keeping all the above in mind, here's a detailed product-by-product price outlook over the next few years:

- **Refined petroleum products:** The worst of the current runup seems to be over. Overall product prices, after rising at an average quarterly rate of 7.3% this year, should slow down. Quarterly rates of advance of 0.7% and 1.4% are seen for 1988 and 1989.
- **Chemicals:** The pattern here follows that of oil—with escalation rates (highly dependent on petrochemicals) slowing down over time. Industrial chemical rates of increase are targeted to drop from an estimated 2.3% a quarter this year to just 0.3% and 0.2% in 1988 and 1989.
- **Steel:** Average product prices will move up 1.8% this year, 3.9% in 1988, and 4.2% in 1989. But advances in heavy structural shapes over the latter two years could be somewhat higher (5% and 4.2%) because of a strong non-residential construction market. On the other hand, alloy oil well drilling casing will remain weak this year (falling 4.1%)—though 6%-plus boosts are anticipated here in 1988 and 1989 as drilling activity picks up.
- **Nonferrous metals:** Prices should hold relatively steady over the rest of the year following an early 1987 runup. After that, however, some additional advances are indicated. Prices will move up about 4% next year. But as demand gains become harder to come by, a deceleration to 2.5% is suggested for 1989.
- **Construction materials:** Structural clay products (dependent on a weakening residential market) should show only a 2.5% annual rate of gain through 1989. Ditto glass, sand, and cement-related items which will only move up at an annual 2-3% rate. But fabricated structural steel (dependent on stronger non-residential activity) will move up 5.6% a year.
- **Machinery:** Prices will firm on an improved domestic investment outlook and somewhat higher exports. The overall price pattern: increases of 2.2% this year, followed by gains of 4% next year and 3.4% in 1989. On a less aggregate level, electrical equipment will increase 2% this year, 4.3% in 1988, and 4.8% in 1989. As for general purpose machinery and equipment, the projected rises are 1.4% this year, 3.3% next year, and 3.9% in 1989.
- **Electronic components:** In response to healthy demand for computers and other equipment, a depreciated dollar, and pressure on the Japanese to increase prices, quotes are projected to strengthen this year and remain strong through the forecast period. Averages for electronic components will advance 1.2% in 1987, 3.9% in 1988, and 6% in 1989. Zero in on semiconductors and related devices and the increases progress from 0.9% to 2.4% to 5.3% from 1987 to 1989.
- **Transportation:** Rising fuel prices and mergers will make for 7.6%, 5.6%, and 5% increases in air fares over the 1987-1989 period. Rail rates will also sport significant increases—following an expected 0.8% decline this year. The projections here: up 3.9% in 1988 and 4.4% in 1989. Looking at transportation costs overall, DRI puts the increases at 3.1% this year, 5.7% next year, and 5% in 1989.

Product price trends into late 1989
(comparison of 3rd quarter pricing)

Product	Percent change 87/86	88/87	89/88
Raw materials, energy			
Lubricating oil materials	9.8	8.7	6.5
Industrial chemicals	7.7	3.0	0.5
Misc. chemical products	1.6	1.7	2.0
Metal			
Steel mill products	1.8	4.3	4.3
HR carbon bar	2.4	4.0	5.8
Hot-dip galv. sheet	4.2	4.0	3.8
Foundry & forge shop prod.	1.4	4.4	3.7
Copper cathode	1.1	3.5	2.3
Secondary nonferrous	3.8	2.3	1.7
Pig lead	5.8	4.5	0.5
Titanium mill shapes	-1.2	2.2	3.4
Components			
Rubber belts & belting	-0.2	1.6	3.0
Corrugated cartons	10.3	2.4	2.7
Electronic components	0.8	4.3	6.2
Mfg. components	1.9	4.2	4.2
Containers	4.3	3.8	3.7
Construction products			
Plastic construction prod.	0.7	1.1	1.1
Plumbing fixtures & fittings	2.5	4.5	2.9
Heating equipment	2.3	4.3	3.8
Bituminous paving material	-3.1	4.1	7.3
Machinery			
Pumps & compressors	1.5	2.7	3.1
Motor & generators	1.8	6.8	5.5
Internal combustion engines	3.1	5.2	4.8
Trucks (under 10,000 lb.)	5.4	3.8	8.9

Source: Data Resources, Inc.
Cost Forecasting Services

Midyear Economic Report

PMs hatch plans for good year

The nation's industrial purchasing executives agree with those who believe that, while things could be better, 1987 isn't going to turn out to be that bad.

A new nationwide survey of *PurchasingWorld* readers finds that 93% of the respondents are expecting their companies to rack up production and sales gains this year. Equally significant, there's little sign of any imminent deceleration—67% see the second half as better than the first half, while 27% see some slowdown, and 6% anticipate little change (see chart).

This upbeat scenario is also suggested by a recent N.A.P.M. Business Survey Committee study which finds that 47% of its members expect the second half to top the first half, 37% expect no change, and 16% expect it to be worse. And the optimism doesn't stop there. The N.A.P.M. study is equally bullish about first quarter 1988. Those looking forward to further gains top those seeing declines by a ratio of 8 to 1.

Even more reassuring is the fact that nearly 60% of N.A.P.M. respondents now describe themselves as being satisfied or optimistic—the highest reading in three years.

The buyers' inflation outlook isn't bad. Some acceleration in the rate of rise is anticipated, but the general feeling is that it will be manageable.

The *PurchasingWorld* study finds that more than half the respondents still hope to keep 1987 price increases to 4% or under. And the 1987 average increase for all buyers is projected to be 4.5%.

That's not to say that the surveyed buyers are complacent. Nearly two-thirds expect a higher rate of increase in the second half as compared to the first half of the year. But the majority of these PMs (62% out of a total of 65% who see such acceleration) say that any speedup in the rate of rise will be "modest" rather than "sharp."

Here again, confirmation comes from the N.A.P.M. Business Survey Committee. While 75% of these top industrial buyers expect higher prices over the next six months, nearly all say the boosts should be selective rather than across the board, and slight or moderate rather than severe.

The two surveys also indicate reassuring trends in these other sectors of the economy as well:

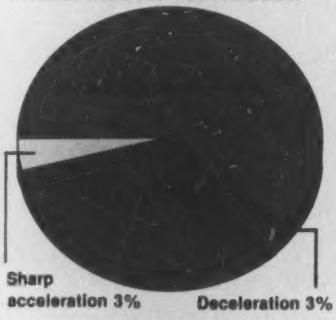
- Inventory accumulation over the next six months will be kept to a minimum, virtually ruling out any new boom and bust inventory cycle.
- Capital spending sights are being raised. But the 38% of N.A.P.M. respondents who expect an increase this year is balanced by 37% who see declines. That's an improvement over six months ago when the higher/lower ratio was 29% to 40%.
- The foreign trade deficit may be ready to shrink a bit. About 57% of the N.A.P.M. respondents note an improvement in export orders—and 40% report some reduction in imports.

PW readers look at near-term trends

(2nd half '87 vs. 1st half '87)

Demand: Still on the rise

Prices: Modest acceleration



Inventories: Slight decline

Source: PurchasingWorld

PurchasingWorld's own survey also hints at some change in import trends. Several buyers note a shift from offshore to domestic procurement.

A continued increase in domestic business, however, could mean some leadtime stretchout. A significant 35% of *PurchasingWorld* survey respondents, for example, now look for some second-half extensions. This is about twice the 16% who feel some speedup is possible. But most buyers feel any problems will be manageable.

Keeping things manageable is also behind some of the current strategies being cited by buyers. Increasing competitive conditions are making for more emphasis on price guarantees, value analysis, detailed cost justifications for boosts, blanket and long-term contracts, just-in-time inventorying, order consolidations, and better internal forecasting.

The current PM thinking is best summed up by one Gulf Coast executive who notes that flexibility and willingness to change is the name of the game. "Our thinking in such areas as sourcing, contractual agreements, and inventorying has undergone significant change—with more innovative moves planned in these and other areas over the next year or so."

Midyear Economic Report

GNP = growth, nurturing, protection

The nation's top econometric forecasting modelers are sticking to their guns. Six months ago, the average of those surveyed by *Purchasing World*—DRI, Wharton, and Merrill Lynch—was pointing to a 2.4% real GNP growth rate for the current year. As of now (see table), that number hasn't changed.

There has been some minor downgrading as far as forecasts for 1988 are concerned, with the earlier 3.1% GNP growth estimate for that year dropping to 2.7%. Even so, this suggests some marginal improvement over the estimate of 2.4% for the current year.

This modest year-to-year gain also carries over into the industrial production sector. This year's estimated 2.2% increase will rise to 2.9% in 1988. If correct, 1988 will mark the sixth consecutive year of economic gain—a remarkable performance in itself.

More important, these numbers refute the gloomy predictions of some who have recently been hedging their bets and calling for a possible downturn in the near future. The fact that three prestigious models—each with its own set of equations—are pointing in the same direction has to be regarded as a positive sign.

Commenting on this, one Wharton spokesman attributes part of this optimism to an anticipated turnaround in our real trade deficit. His estimates suggest that the deficit will drop by nearly $25 billion (in 1982 dollars) over the 1986-88 period.

Prices don't seem to present much of a worry to these econometricians, despite the recent concern about accelerating inflationary pressures. That's not to say that the average 2.5% finished producer price index advance isn't above the earlier 2.2% projection, but it's hardly an earth-shaking change.

Also reassuring as far as 1987 prices go is the fact that the GNP price deflator (the all-inclusive barometer that includes services and consumer prices as well as producer quotes) remains at the 3% level suggested at the beginning of the year.

The price groundrules for next year aren't likely to change that much, either, even though 1988's average GNP and finished producer price gains (estimated at 4.2% and 4.5%, respectively) are about 1-2 percentage points above forecasted 1987 readings. But again, this is what the models were predicting for 1988 six months ago.

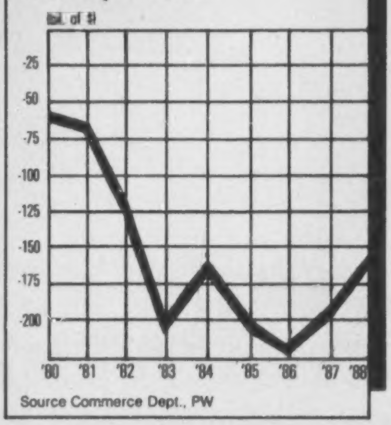
Interest rates aren't going to be much of a problem, either, if model projections are anywhere on target. This year's 12-month average 8.1% reading for the prime rate, for example, suggests a second half 1987 leveling off after recent advances. And the same goes for 1988 when the three-model average holds in the 8.2% range.

Also on the reassuring side: There is surprisingly little variation among the models. Only about one percentage point separates next year's estimates of GNP. ***PW***

PW's econometric model printout

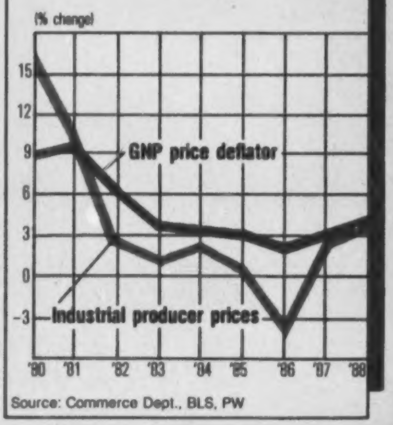
	1987	1988
Real GNP (% change)		
DRI	2.8	2.9
Wharton	2.3	3.0
Merrill Lynch	2.2	2.2
AVERAGE	**2.4**	**2.7**
Industrial production (% change)		
DRI	2.4	3.1
Wharton	2.2	3.3
Merrill Lynch	2.0	2.3
AVERAGE	**2.2**	**2.9**
GNP price deflator (% change)		
DRI	2.7	3.4
Wharton	3.2	4.3
Merrill Lynch	3.2	4.8
AVERAGE	**3.0**	**4.2**
Finished producer prices (% change)		
DRI	2.5	3.9
Wharton	2.5	4.7
Merrill Lynch	2.6	5.0
AVERAGE	**2.5**	**4.5**
Consumer prices (% change)		
DRI	3.5	4.4
Wharton	3.6	4.6
Merrill Lynch	3.9	5.2
AVERAGE	**3.7**	**4.7**
Prime interest rate (%)		
DRI	7.6	7.6
Wharton	7.9	8.7
Merrill Lynch	8.9	8.4
AVERAGE	**8.1**	**8.2**
Unemployment rate (%)		
DRI	6.5	6.2
Wharton	6.7	6.5
Merrill Lynch	6.7	6.8
AVERAGE	**6.6**	**6.5**

Budget deficit: Slow improvement



Source Commerce Dept., PW

Prices: slight acceleration



Source: Commerce Dept., BLS, PW

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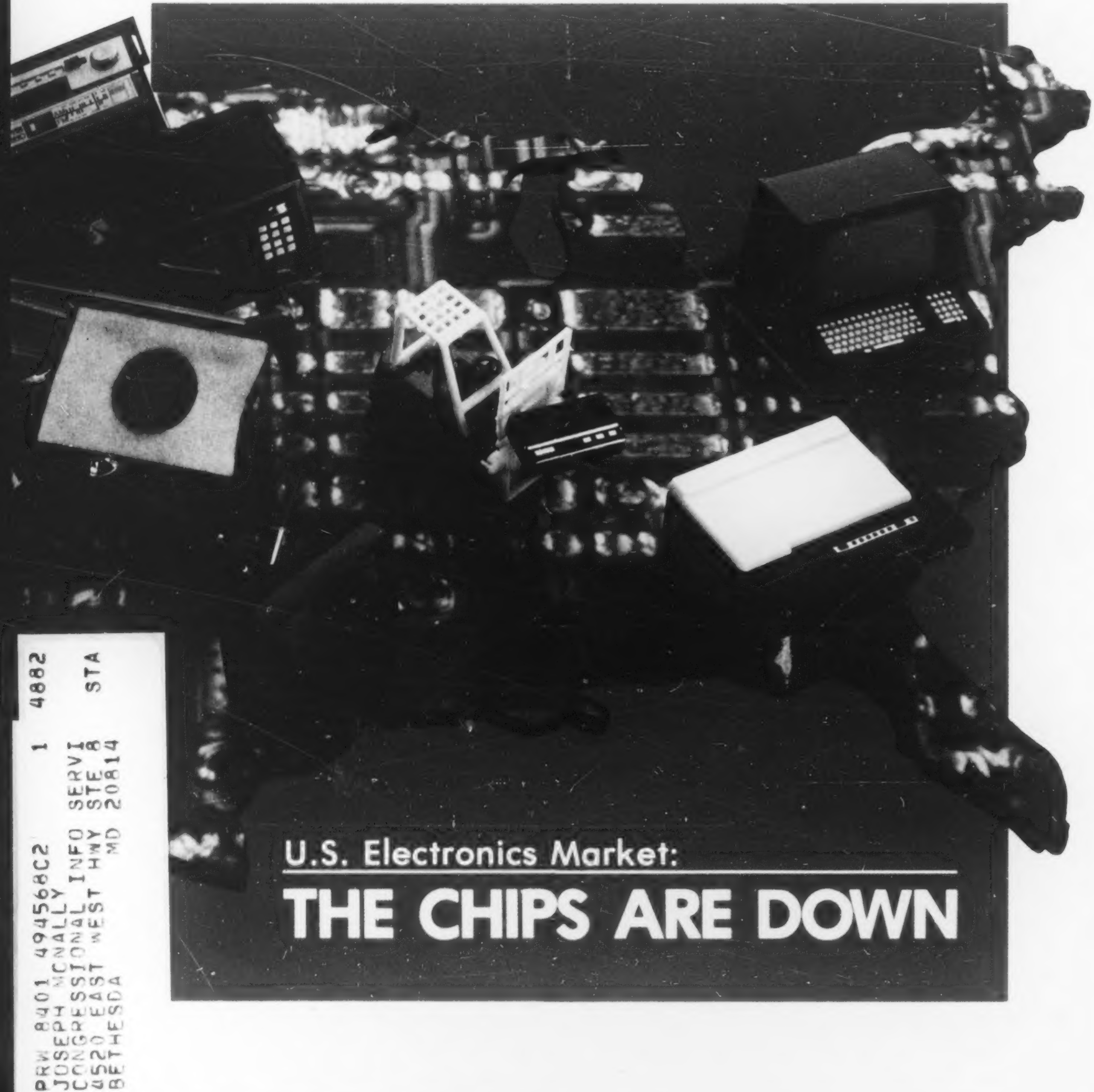

U.S. Electronics Market:

THE CHIPS ARE DOWN

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Time for a new approach to MRO buying

Murray on law: a sample case of suits

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Helping you manage the business of buying
August 1987 Vol. 31 No. 8

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PW PREDICTS

Rising prices bring increased capacity

There's little justification for talk about a significant increase in inflation. Major price yardsticks such as the industrial producer price and the cost-of-living indexes are edging up. But the advances are moderate—less than during early spring.

The only big increases have been in raw materials. *PurchasingWorld*'s industrial spot market barometer is running 11.5% ahead of late 1986 and 23% ahead of last summer. But this yardstick of crude materials is heavily weighted with metals and energy—both of which had been extremely depressed in 1986.

The worst of the runup may be over since production of many of these basic raw materials is about to be beefed up. Several large outfits, both here and abroad, have announced step-ups in metals output. And the same trend is possible in the energy sector.

The world is full of unused productive capacity—in metals, oil, chemicals, plastics, and other basic commodities. As prices rise, more potential will be unleashed, resulting in more supplies and a leveling off in prices.

Historical perspective also weakens the argument that recent rises in raw materials herald a more general inflationary surge. Over the past few decades, there has been a relatively poor correlation between basic raw materials and overall price inflation. During the 15-month period ending in the spring of 1984, sensitive raw materials—both on the spot and futures markets—rose significantly. Yet the producer price index advanced less than 1% in 1983 and only 1.7% in 1984 and 1985.

Also arguing against any big new inflationary runup is the fact that unit labor cost increases remain muted. This price force behind the underlying rate of inflation should rise only 2-2.5% this year—no different from last year's performance. And producer prices excluding food and energy have been rising at only a 2% annual rate in 1987 vs. 2.6% in 1986.

This latter trend suggests that domestic products are not following imports up the price ladder—probably because U.S. markets are still not that robust and many American firms are focusing on increasing market share rather than raising prices.

A new survey of corporate executives also points to a cautionary producer approach to price boosts. Only 37% expect their 3Q prices to be above a year ago.

Nor is it certain that suppliers can hold onto all of the boosts that have been posted. There's plenty of excess capacity in fabricated and raw materials.

Most economists remain optimistic about holding advances to modest proportions. One survey of 35 top forecasters suggests only a 4.5-5% inflation rate (cost-of-living basis) over the next six months.

Engineering plastic

The day when you'll be hosing down your all-plastic car may still be far off but more auto parts are going polymer. So are a lot of other end-use markets where engineering plastics are replacing metals, glass, wood, and other natural materials. That's the gist of a new Frost & Sullivan study which sees these materials growing 7.6% annually through 1990 to 1.6 billion lb vs. 1.1 billion lb in 1985.

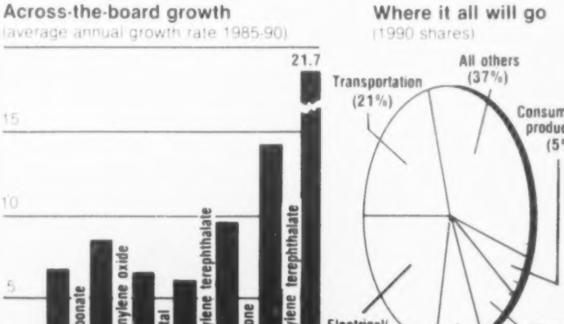
The big boost in the auto sector will come from large, panel-type parts, adding to the volume already established in bumpers, grilles, trim, lights, and other parts.

The electrical/electronic sector will also increase its use of these plastics, overtaking transportation on a poundage basis by 1990 (see chart).

By resin types, nylons lead the pack and will remain the No. 1 engineering resin over the next few years, accounting for more than a third of the market's total poundage and dollars. Polycarbonates will remain the second-highest volume engineering plastic. The biggest percentage gains will come from relatively small-volume polysulfones and polyethylene terephthalates.

These resins are expected to be under strong downward price pressures, both from end users and competitive polymers. In commodity resins, suppliers are busy upgrading resin properties and penetrating market segments where high-performance needs are more marginal. But engineering resin producers are fighting back by lowering both resin and processing costs.

A look ahead at engineering plastics


Across-the-board growth
(average annual growth rate 1985-90)

Where it all will go
(1990 shares)

Source: Frost & Sullivan

PW PREDICTS

Lead

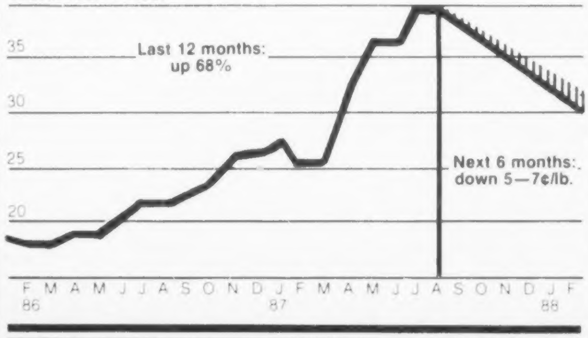
CURRENT SITUATION: Blame recent high prices on supply disruptions (the Canadians, Peruvians, and Mexicans are behind in deliveries to the U.S.) and low producer inventories rather than a big spurt in underlying demand. Refiners' inventory stocks are only in the 30,000 ton range—less than one month's supply at current shipment rates. **The recent near- 40¢/lb price (up more than 15¢/lb from levels prevailing 1-1.5 years ago) seems unsustainable** when production increases.

DEMAND: All signs point to another lackluster year. The battery market, accounting for 60% of annual lead usage, is stagnating as new auto sales drop off by a million units. **Domestic consumption will only equal last year's 1.2-million-ton level vs. 1.3 million tons in 1984.** Nor is the longer-run outlook bullish. The use of smaller batteries, the leaded gasoline phaseout, and reduced lead cable sheathing (because of fiber optics competition) will hold demand gains to 1% a year through 1999.

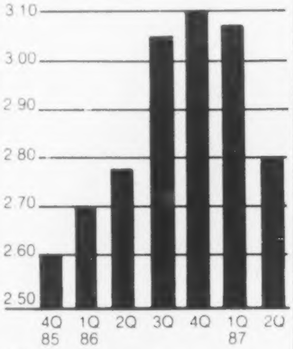
SUPPLY: Current tightness should disappear soon as work stoppages end and new facilities are added. Additional capacity is expected in Australia, India, Latin America, and Canada. The new Faro mine in Canada alone will add 65,000 tons. Increasing production in the U.S. from two Missouri mines will raise primary totals here 25,000 tons this year (to over 400,000 tons). And more worldwide capacity will be ready by 1988 when **current production deficits give way to surpluses.**

PRICE OUTLOOK: It's no longer a question of whether quotes will fall but when and by how much. The feeling is that prices will gradually decline as new supplies reach the market during the next six months. Tags will drop to 30-32¢/lb by this winter. And that's probably where they'll stabilize in 1988. **That's a high level—50% above the lows of early 1986 when lead was 18¢/lb.**

Producer lead prices
(Index 1967 = 100)



Molybdenum oxide
(Dealer price $/lb.)



Molybdenum

Prices should begin to bottom out following recently announced cutbacks by primary producers. Don't expect any rebound to earlier highs—for demand remains disappointing and byproduct production continues at recent high levels. Also worth noting: The largest Chilean producer (Codelco) has been mining richer grades of moly ore and has now supplanted Amax as the world's largest producer. In any case, prices are now at bargain-basement levels—with the dealer oxide quoted in the $2.60-2.70/lb range—well under the $3.15/lb high of last fall and nowhere near the $4.25 quote of early 1985.

Aluminum

Modest price increases are still the order of the day—with boosts recently posted on a variety of sheet, plate, and extruded products. Market ingot tags have been following suit. At latest report the basic material was fetching well over 70¢/lb—up close to 20¢/lb from beginning-of-year levels. Also indicative of strength: An industry shift to price-at-time-of-shipment rather than price-at-time-of-order. Demand isn't all that bad, either—with shipments, aided by a falloff in imports, rising to near 7.85 million tons this year—up 2.5% from 1986 levels.

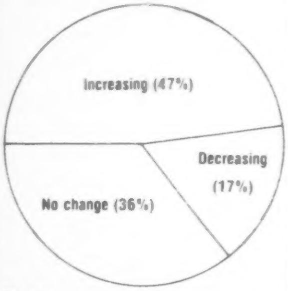
Petroleum

OPEC's avowed aim to bring crude oil into the $20/bbl range by early next year could run into trouble: There's the likelihood of overproduction by Iraq when a new trans-Turkey pipeline opens later this year. Excess output by the United Arab Emirates is also likely. If both these nations exceed their quotas, OPEC production could hit 18 million bbl/day—well above the official 16.6 million limit and enough to bring another global oil buildup and a new round of price easiness.

Transportation

Figure on some truck rate boosts—as three of 10 major rate bureaus move to boost tags. Both the Eastern Central Motor Carriers Association and the Middlewest Motor Freight Bureau are increasing rates 2.5% overall—with the Pacific Inland Tariff Bureau posting a 1.5% hike. ECMA will boost rates between 2-7% with the higher rates applying to shorter-haul traffic. The MMFB will hike rates 5% on freight handled up to 300 miles, with smaller increases applying on shipments moving greater distances. On the other hand, some major carriers (Roadway Express, Consolidated Freightways, Yellow Freight System, Carolina Freight Carriers, ABF Freight System, and Overnite Transportation Co.) have elected not to take the increase.

Import dependence



Source
Boston University School of Management

Import dependence

Don't downgrade offshore procurement—despite today's weaker dollar. If a new survey of 207 companies by Boston University is accurate, there are still plenty of opportunities abroad. A surprising 47% of queried firms expect to beef up their import percentages. Contrast this to the 17% who expect to cut back on incoming shipments and the remaining 36% who are not anticipating any appreciable change. One reason for this continuing interest in imports, aside from still-significant price advantages, is that many firms want to be wired into global technology.

Copper

The red metal finally seems to be climbing out of its deep hole. Producer prices have moved up strongly over recent months—and at last report were running some 15¢/lb above late 1986 levels. Credit the pickup to a drop in world stocks and global supply tightness. In any case, current holdings are now put at only 4.3 months of consumption as compared to the normal 7-8 month level. Prices over the next few months are likely to remain at current high levels—though there may be some modest correction after the recent runup.

Low-density polyethylene

Figure on paying about 2-3¢/lb more for most grades—with the bellwether liner grade moving up into the 33-34¢/lb range. Prodding the increase along are good demand (expected to run 7% ahead of 1986) and an industry operating rate above 90%. This supply tightness has brought some delivery-time stretchouts, and is expected to persist into 1988. At that time another 5% demand increase will be partially offset by a relatively small 3-4% increase in new production potential. Upshot: continued close-to-full-capacity operating rates.

Steel

The current mini-boom could run out of steam before long. Shipments, for example, could drop to only 32-33 million tons

Chemicals

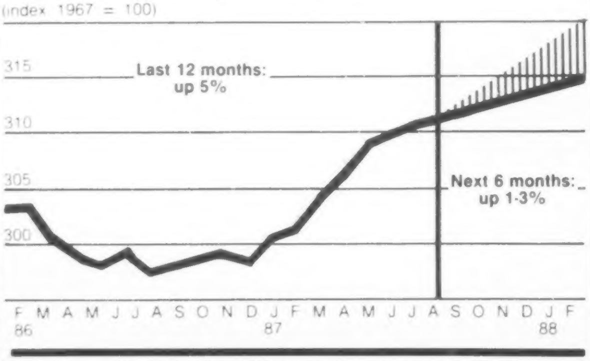
CURRENT SITUATION: Demand is up substantially. Year-to-date production is 4-5% ahead of a year ago. **Prices are up significantly, too,** because of better supply-demand balance as operating rates increase to 82%, and because of rising petrochemical feedstock costs resulting from the price increase in crude oil. Industry price averages are 5% ahead of a year ago. The increases are even greater for chloralkalis, benzene, styrene, and some plastic resins.

DEMAND: Current trends will continue this year. Most econometric models call for a 4% gain—almost twice the expected general growth rate and not much under last year's 4.6% advance. Vendors see sales volume in real terms increasing 5%. **Best showing this year will be in plastic resins where a 7% increase is expected. Organic chemicals should advance by 4%.** But paints will only equal 1986 levels.

SUPPLY: No problems are expected—but some organics may remain snug. New capacity is coming on stream relatively fast—**2% was added onto production potential over the past year. Gains should be bigger in 1988 and 1989**—judging from new plant and equipment plans. Surveys suggest a 6.5% increase in real spending in 1987 and an even bigger 1988 advance. This trend is most apparent in plastic resins where 3.2% capacity increases are estimated for 1988.

PRICE OUTLOOK: Further advances are inevitable. Aiding the trend will be continuing good demand, steady-to-higher feedstock costs, and higher import tabs engendered by a weak U.S. dollar. But there will be some exceptions such as benzene and styrene. These latter moves should moderate the overall upward impact, **holding average chemical price boosts to 1-3% (2-4% at annual rate) for the next six months.** The same goes for 1988—industrial chemical tabs are expected to be up another 3-4% on average.

Chemical & allied product prices
(index 1967 = 100)



PW PREDICTS

Truck fleet costs

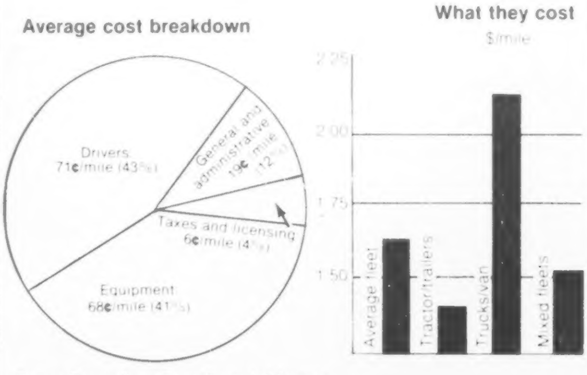
Running your own private truck fleet can be costly. A new nationwide survey suggests that the typical corporate operation now costs $1.63/mile.

The study of 577 fleets (compiled for the Private Truck Council of America) shows wide differentials. Fleets comprised principally of tractor/trailers cost $1.38/mile. Companies using mostly straight trucks and vans spend $2.13/mile. And those with mixed fleets fall in the middle ($1.52/mile).

Other key findings of the survey:

- **Cost breakdown:** Mixed fleets spend slightly more for equipment than for drivers—63¢/mile vs. 62¢/mile. But, overall, drivers' wages account for the biggest portion of cost—71¢/mile vs. 68¢/mile for equipment.
- **Unionization impact:** Union drivers for company-owned trucks make an average of 15¢/mile more than non-union drivers. With leased fleets, the difference is 25¢/mile.
- **Leasing vs. ownership:** Fleet leasing reduces overall tractor/trailer outlays substantially. For union fleets the figures are $1.49/mile (company-owned) vs. $1.42/mile (leased). For non-union fleets the comparable figures are $1.35/mile (company owned) and $1.13/mile (leased).
- **Age of equipment:** On average, tractors are five years old and straight trucks are seven years old.
- **Intracorporate hauling:** Some 24% of responding fleets allow private carriers to haul freight for compensation for other members of their corporate family. Among tractor/trailer operations, 56% participate in intracorporate hauling.
- **For-hire activities:** Some 19% of all surveyed private fleets and 37% of the tractor-trailer operators have ICC authority for supplemental for-hire operations.

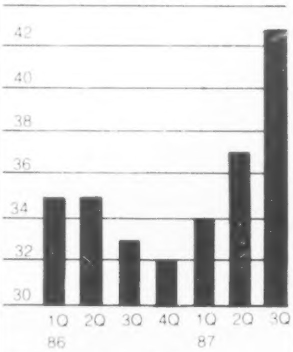
Private Truck Fleets



Source: Private Truck Travel Council of America

over the second half (vs. nearly 36 million in the first half). Supplies, in the meantime, should begin to improve on more normal USX output and the elimination of production problems at other mills. Given this scenario, price hikes should be harder to come by. Indicative of the changing climate: reluctance on the part of some mills to go along with an announced $20/ton boost on carbon and alloy plate. Other previously announced hikes seem to be going through—namely on bar and stainless plate.

Polypropylene
Homopolymer grade
(Market price ¢/lb.)



Polypropylene

Prices are moving up about 4¢/lb—with some 43-45¢/lb now asked for the bellwether homopolymer grade. Behind the increase: A combination of rising propylene costs plus strong domestic and export markets. Tight supplies are still another factor behind the climb which has seen tags rise 10¢/lb over the past 9 months. As of latest report, for example, producers were operating at virtually full capacity. But some relief is in sight. Next year's potential should be up by a hefty 12%—and by 1990 some 1.7 billion pounds or 26% will have been added to industry nameplate.

Paper

Producers are scheduling as much as $40/ton increase in uncoated free sheet. But boosts will probably affect only reprographic and possibly offset paper—with less upward pressure on sheet-fed forms and free-sheet forms. Major suppliers have also announced a $60/ton advance for coated groundwood—bringing asking prices on the No. 5, 40-lb grade to $740/ton. Little change, however, is expected on coated free sheet grades. Linerboard, in the meantime, remains at a solid $350/ton, and corrugated shipping container prices still continue to edge up.

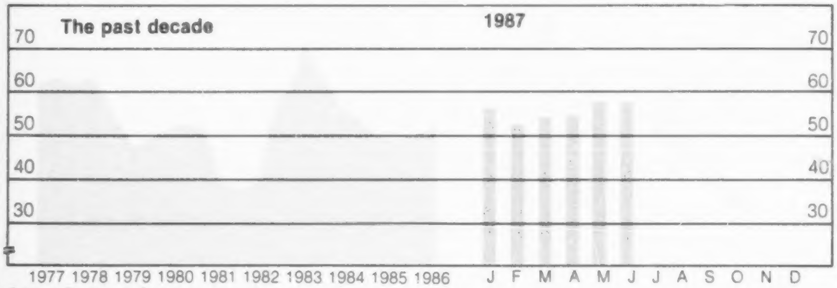
Computers

Price slippage persists despite relatively high demand. Latest moves include 1) a $300 reduction in IBM's portable Model 2 PC (to $1,395) which is being replaced by a newer Model 3 version and 2) Sun Microsystems' introduction of a line of high-performance workstations that offer performance comparable to a minicomputer for one tenth the cost. This follows an earlier (April) 37% reduction of its low-end workstation to under $5,000—a move that was subsequently followed by its main competitors, Apollo Computer and DEC.

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Capital spending's a capital idea

The near-term business outlook doesn't look bad. Late summer and fall will see a continuation of the first half's slow growth pattern.

The latest N.A.P.M. Business Barometer reading suggests continued advances—it has been averaging 5% above the neutral 50 mark (see chart).

If this pattern continues, says N.A.P.M. Business Survey Committee chairman Robert J. Bretz, it would support a 3.4% real growth rate for 1987 as a whole.

The most bullish segment of the N.A.P.M. indicator is new orders, where 35% of the responding purchasing executives report "better" incoming business. Only 15% note some decline over the past month.

Other evidence pointing to a tolerably good second half is a new Conference Board survey that finds capital appropriations—a lead indicator of plant and equipment spending—moving up the for third consecutive quarter (see chart).

As Walter Arvin, the economist who directed the study, puts it, "The economy should see a gradual increase in capital spending during each quarter of this year, with a possible spurt in the final quarter. Spending will also be aided as corporate tax rates fall."

Capital spending will also look better. Since 1982, U.S. capital stock has been increasing at less than 1% annual rate.

Even consumer buying intentions have leveled off after recent declines (see chart). The 4.2% who plan to buy a new auto over the next six months is far under the 5%+ figures of 1986. But this is offset by expectations for heftier appliance and carpet purchases.

Consumer confidence—bolstered by rising wages and relatively low inflation—remains high. The number of people expecting more jobs has also been rising.

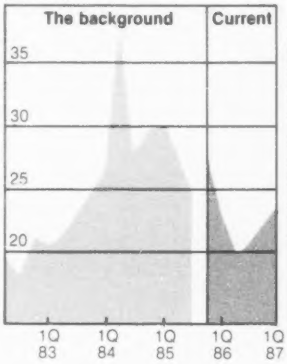
The latter projection is supported by an increase in factory overtime. The figure (3.8 hours) is at its highest level in years, suggesting that manufacturers will soon have to add to their work forces.

A gradual shift in trade away from imports and toward exports is also a positive sign. This is especially true for capital goods firms because their major foreign competitors are in Japan and Europe—where currencies have appreciated sharply against the dollar over the past two years. One machinery maker observes, "The weaker dollar is starting to work. American machines are now easier to buy all over the world."

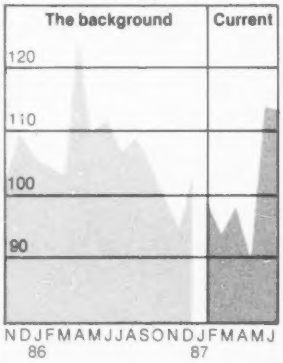
That's not to say that big overall economic gains lie ahead. With Detroit expected to turn out only 7-7.5 million domestic

Leading indicators

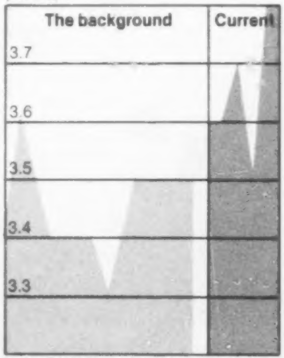
1. Capital appropriations
(Bil. of $)



2. Consumer buying plans
(Index: 1985 = 100)



3. Factory overtime
(Hours)



cars this year (vs. 8.2 million in 1986), that would be asking for too much.

But the preponderance of evidence is bullish. A recent survey of top economists calls for GNP to grow at a 3% annual rate through yearend and into early 1988.

Execs expect booming business

Although the economy has been improving for the past four and a half years, it still has a way to go, according to 1,000 top executives surveyed by the Conference Board. The survey shows the second consecutive quarterly advance in its overall "confidence index"—a barometer based on current and future trends in the economy and in individual industries.

A survey spokesman adds that strongest responses came from executives in the rubber, publishing, and primary metals industries where confidence levels reached record highs. Renewed strength in these industries underscores rising commodity prices, the declining dollar, and increasing export volume.

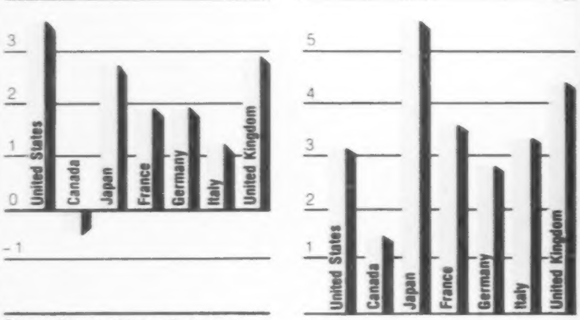
The latest Dun & Bradstreet quarterly survey of more than 1,400 business leaders is even more encouraging. The firm's "composite optimism" index is now at its highest level since the spring of 1985.

As Joseph W. Duncan, D & B's corporate economist puts it, "The improving trade picture is the most important factor behind the increased optimism, particularly among manufacturers. Orders for U.S. exports are rising."

Equally encouraging is the fact that these corporate pace setters do not anticipate any major jump in prices. The 37% who see 3Q increases compared to a year earlier is only 1% more than the 36% reading of the previous 3-month period.

Duncan also adds that "the percentage of executives forecasting price hikes remains far below the levels reported in the first three years of this decade. Moreover, the price increases that are made will be small."

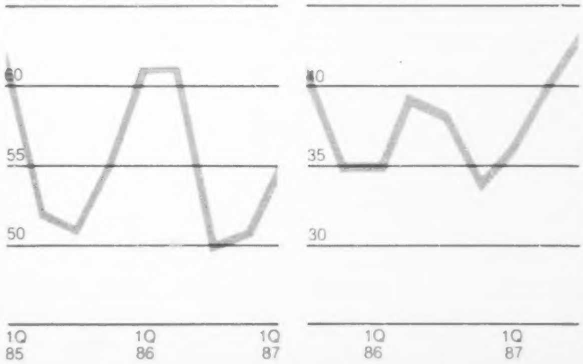
Global productivity trends



The past year (1986) (Percent change) — **The longer term (1979-86)**

Source: Bureau of Labor Statistics

Businessmen turn more optimistic



Conference Board (measure of business confidence) — **Dun & Bradstreet** (optimism index)

Also of interest to PMs: projections of continuing close-to-the vest inventory policies. The overall percentage of firms planning 3Q increases remains at the previous quarter's level. Among manufacturers and wholesalers, the number expecting increases actually dropped by 1%.

U.S. leads in efficiency gains

We're not doing that badly on the factory productivity front compared to what's been happening in the rest of the industrialized Free World.

A new Bureau of Labor Statistics analysis finds that the 3.5% U.S. efficiency increase posted over the past year surpassed that of both Japan and Western Europe. This reading looks quite impressive when stacked up against the 1.7% trade-weighted average gain of the nine key foreign competitors. It is the first time since BLS began tabulating this material in 1950 that the U.S. has recorded the largest percentage increase of any country.

One year does not guarantee that we're heading for the top, but it does follow an even better 1985 when U.S. productivity rose 4.4%. Things also look good for the longer run. Over the 7-year period ending in 1986, U.S. manufacturing efficiency rose at an average annual rate of 3.1%—not that much under comparable figures for Japan (5.6%), France (3.6%), and the U.K. (4.4%).

The new figures suggest that U.S. modernization is finally beginning to pay off. A more efficient labor force may also be contributing to the recent performance improvement.

Another encouraging sign: U.S. factory wage boosts last year were lower than any other industrialized nation. At 2.9%, they were also under the U.S. efficiency gain. So unit labor costs actually fell 0.6%.

This is in sharp contrast to other countries where unit labor cost increases (calibrated in their own domestic currencies) rose from 0.7% (Japan) to 5% (U.K.).

BUSINESS DATATRAK

Because of the dollar devaluation, those unit labor costs really skyrocketed in dollar terms last year—Japan (42.6%), France (33.1%), West Germany (39.8%), Italy (31.9%), and the U.K. (18.8%).

Average out all the above figures and it means that U.S. manufacturing labor costs plummeted 21.8% last year *vis-a-vis* those of our major competitors.

CURRENT PRICES

Oil's influence spreading

The modest increases in industrial producer prices has spilled into early summer—another .5% has been tacked onto overall averages over the past 30 days.

As in other recent months, the prime mover has been energy (notably oil). But now the impact is spreading into such key oil derivatives as chemicals and synthetic materials. Metals have also continued to move up. Capital goods tags, however, have remained relatively steady overall.

Here's a more detailed rundown:

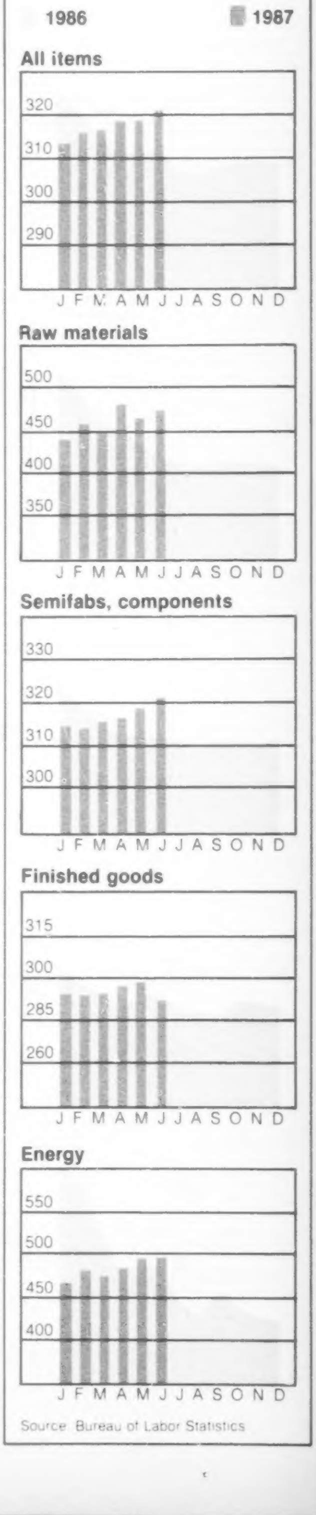
- **Energy:** Another 1.7% was added to the average bill over the past month. Significant boosts were recorded in crude petroleum, gasoline, home heating oil, electric power, diesel fuel, and jet fuel. About the only products heading lower were liquified petroleum gas and natural gas.
- **Chemicals:** Organic formulations—those most affected by petroleum—zoomed up an eye-opening 3.7% over the month. But inorganic chemicals showed only a 0.2% advance and were still about 1% under year-earlier levels.
- **Synthetic materials:** The same energy impact pushed plastic resin averages up 2.4% in the past 30 days. There were also some subdued advances in synthetic rubber and fibers.
- **Metals:** Continued advances were reported in copper, aluminum, lead, and zinc. Nonferrous and steel scrap also rose. But most feel that lackluster demand will bring some leveling off soon.
- **Capital equipment:** Averages remain relatively unchanged as increases in aircraft, heavy trucks, switchgear, and material handling equipment offset declines in light trucks,

This month's breakdown

	Latest level (June)	% change Month ago	from: Year ago
Bearings	355.6	0.1	−0.3
Bolts, nuts, etc.	278.6	0.2	0.6
Chemicals, inorganic	291.4	0.2	−1.0
Chemicals, organic	365.9	3.7	13.1
Concrete products	325.6	0.1	0.0
Corrugated cartons	295.9	0.6	12.3
Cutting tools, small	293.0	0.0	0.6
Electric lamps (bulbs)	347.5	0.1	0.1
Electronic components	201.8	−0.2	0.5
Fans and blowers	370.0	−0.2	1.2
Foundry and forge products	363.8	−0.1	−0.1
Fuel oil (residual)	650.8	1.7	43.7
Furniture, commercial	326.8	0.1	2.9
Gasoline	404.4	3.1	3.0
Glass, flat	237.1	0.7	3.2
Glass containers	400.8	0.9	0.1
Gypsum products	328.3	−1.8	−7.3
Hand tools	395.0	0.2	3.2
Hand tools, power driven	241.6	−0.2	1.4
Industrial furnaces	402.3	0.0	2.0
Integrating and measuring instruments	239.7	−0.4	1.9
Internal combustion engines	358.9	0.0	1.6
Lubricating oil	N/A	N/A	N/A
Lumber millwork	329.7	0.5	3.2
Material handling equipment	298.9	0.3	0.9
Metal containers	360.3	0.1	−0.3
Metal mill shapes (nonferrous)	310.7	0.6	3.3
Metal tanks	299.6	0.2	−0.1
Motors and generators	355.5	0.1	1.9
Motor trucks	318.7	−0.9	2.4
Office and store equipment	158.8	0.1	2.8
Paperboard	295.1	−0.4	9.9
Paper boxes and shipping containers	286.5	0.4	7.4
Paper office supplies	242.4	−0.3	2.5
Paint	284.1	0.2	1.1
Plastic resins	311.7	2.4	5.6
Precision measuring tools	274.9	0.9	2.6
Pumps and compressors	365.8	0.1	1.2
Refractories	372.6	0.6	0.1
Rubber belts and belting	335.3	0.8	−0.6
Scales and balances	234.0	0.0	1.2
Steel products	352.8	0.1	1.5
Switchgear	292.9	0.5	2.7
Textiles, synthetic fibers	147.5	0.3	−1.2
Textiles, gray fabrics	154.9	0.8	2.4
Tires and tubes	231.0	0.0	−1.6
Transformers and power regulators	234.1	−1.2	0.5
Welding equipment	303.9	0.0	0.9
Wire and cable	207.2	0.4	0.4

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics

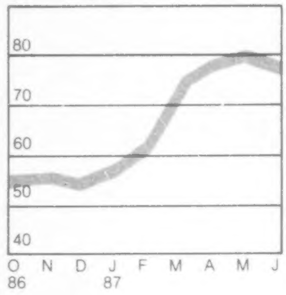
power transformers, and integrating and measuring instruments.

Other trends worth noting: 1) Some new boosts in packaging—notably corrugated and glass containers, 2) declines in paper office supplies, and 3) leveling off in construction materials due to a less rosy outlook on housing starts.

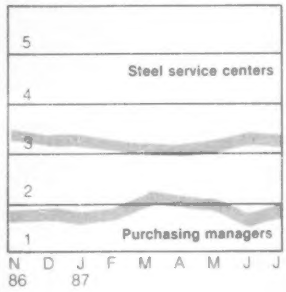
Where do we go from here? Government price watchers see continued advances in the fall. But they add that because energy is already factored in, future increases will be somewhat more modest than those posted during the first half of this year.

Steel

Operating rates

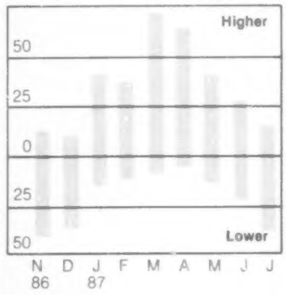


Inventories
(Months supply on hand)

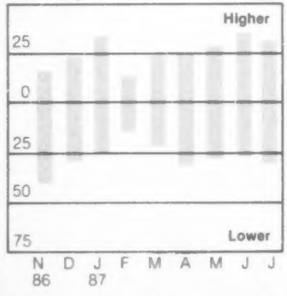


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 31%
SAME 52%
SLIGHTLY BELOW 17%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 4%
SAME 79%
5-10% BELOW 13%
10-20% BELOW 4%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

Buyers are getting less demanding

Steel demand—after running ahead of projections during the first half of the year—may be ready to take a breather.

At least that's what distributors responding to the latest Steel Service Center Institute (SSCI) survey are saying. The last report shows that 39% anticipate a decrease in incoming orders over the next three months—more than double the 16% who are still betting on further increases.

This marks a continuation of recent deceleration. Two months ago, expected increases outweighed expected decreases (42% vs. 13%). And last month it was basically even—25% anticipated increases and decreases in new orders.

SSCI president, Andrew G. Sharkey, says the falloff reflects the slowdown that traditionally hits association members every third quarter. But he does add that those anticipating near-term gains are still above the levels noted last summer.

One possible factor contributing to the more cautious service center outlook could be General Motors' "big mill" approach to steel procurement for 1988 cars. It suggests that some distributor business will be shifted over to integrated steel producers.

Overall user purchases of the metal may also be ready to level off. It looks like a standoff for the next few months as the 31% of queried buyers thinking of increasing purchases is offset by another 31% who think they'll be buying less metal over the next three months.

While purchases may be a bit less robust through early fall, there's little sign of substantial downward pressure on prices. The GM negotiations alluded to above did result in some concessions. GM reportedly acquired steel for 1988 model vehicles 2-3% under what it has been paying for 1987 models. But that's about it as far as price weakness is concerned.

The latest SSCI survey finds most distributors now reconciled to having to pay more for their metal over the next six months. In the latest monthly survey, four out of every five see price increases, and 11% put the advance at over 5%.

Nor do imports offer opportunities for lowering procurement costs. Only 17% of these same distributors see tags on incoming shipments of carbon steel products running under comparable domestic levels. A year ago, the figure was 45%.

And the same trend is noted for stainless steel where the 35% noting bargains compares to 83% a year earlier. Equally important, only 6% now say the savings are in excess of 10%.

Steel buyers agree. Only 17% say foreign prices are lower than comparable domestic levels vs. 40% in April. Again, the differentials are dubbed "slight."

Buyers aren't too happy about availability, either. Several product lines are now listed as being candidates for tightness over the next six months. Leading the pack is coated sheet. But plate, hot-rolled sheet, and cold-rolled sheet are also mentioned by a significant number of queried buyers.

Fear of shortages, however, has apparently not caused any increase in user inventories. Quite the contrary. The typical buyer currently has only a 1.8 month's supply on hand vs. 2.04 a year earlier. And judging from responses to another question, they may pare stocks even more over the next few months.

Steel service centers—notwithstanding an increase in inventory over the past month—also imply that they'd like to see slimmer inventory levels. Some 15% rate current holdings as "too high" vs. only 9% who see them as being "too low."

PROCUREMENT STATUS

Inventories sprout up

The trend toward tightness is continuing. The evidence comes from ***PurchasingWorld***'s exclusive leadtime index (at 51, just above the neutral 50 mark for the fourth month in a row) and the N.A.P.M. speed-of-delivery yardstick which shows delays outrunning faster performances (15% vs. 5%).

The N.A.P.M. report also notes items in short supply, including galvanized, coated, and cold-rolled sheets and stainless pipe and tubing. Also hard to get are polystyrene, plastic resins, caustic soda, and a few electronic components.

This may be why buyers report some slight inventory accumulation (19% higher vs. 17% lower). This is the first time in three years that accumulators have dominated.

But this small advance is being partially offset by somewhat higher manufacturing activity. The increase in terms of days' supply is minimal.

Clearly then, no one is really worried or laying in a big extra supply—a feeling that PMs would seem to confirm. Several say that items like steel may actually ease due to a combination of reduced ordering and an increase in the industry operating rate.

As for plastics, new capacity is scheduled to come on stream over the next year. A similar redressing of imbalances is seen in electronic components as Japanese producers raise production rates slightly.

Perhaps forward buying is the best indication that things are under control. In the production material sphere, only 19% of PMs surveyed are now committing 90 days or more in advance vs. 25% the previous month.

As one buyer puts it, "There's nothing to suggest a significant change in the procurement climate—not with operating rates still near 80%."

Signs of a pickup in capital spending could lead to more capacity. The N.A.P.M. notes that "for the first time in many months, a number of members now plan to expand their capital expenditures."

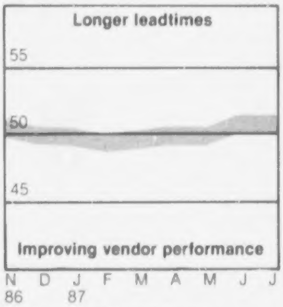
If true, leadtimes should flatten out by fall or winter—assuring continuation of one of the longest buyers' markets in post-war history.

This is also backed up by latest capital spending surveys. New tabulations suggest that investment spending will rise 3-3.5% this year.

Monthly procurement status report

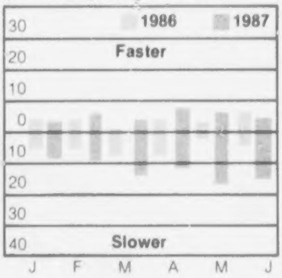
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



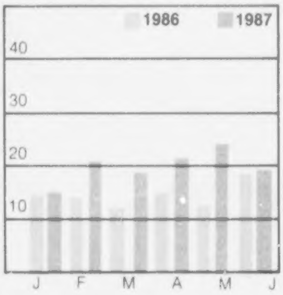
Delivery performance

(Percent reporting deliveries)



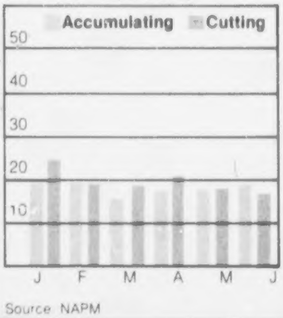
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Steel leads are out 2-4 weeks; heavy and light plate (12-15), and structurals (4-6). Cold-rolled sheets are unchanged at 10-12. Aluminum coil and sheet take 18-20 weeks; plate is 12-16.

Cleveland: Corrugated is out to 3-4 weeks. Elsewhere, it's status quo: folding boxes and polyethylene (2-3); steel canisters and maintenance paint (2); skids, softwood plywood and lumber (1-3); metal alloying materials (on demand); and cold-finish aluminum (8).

Los Angeles: Weekly waits: Galvanized and heavy-duty steels (12-14), grey iron castings (6-8), brass castings (8-10), domestic fasteners (7-9), lube oils (2), wire round resistors (8-12), linear ICs (30), polyethylene bags (4); aluminum sheet and pipe (12).

Houston: Extensions in plastic resins brought HDPE and polypropylene to 40 days. Some cylinders and valves are slow, too. Galvanized steel coils are in to 90 days. Heavy equipment items are steady: 4-6 months for pumps; 3-6 months for low-voltage motors.

Philadelphia: Stainless round coil from mills are out 2 weeks (to 14), but corrugated boxes are in to 2 weeks and xerographic paper in to 2 days. Other weekly waits: standard drills (2-4), taps (3-4), grinding wheels (4-6), and cutting oils and lubes (4-6).

Pittsburgh: A few extensions in nonferrous. Silicon is out to 3 weeks and zinc is out to 4 because of a long Canadian strike. Other unchanged (weekly) leads: corrugated (3-4), plastic packaging (2-3), and plastic resins (5-6).

Leadtimes (in weeks)

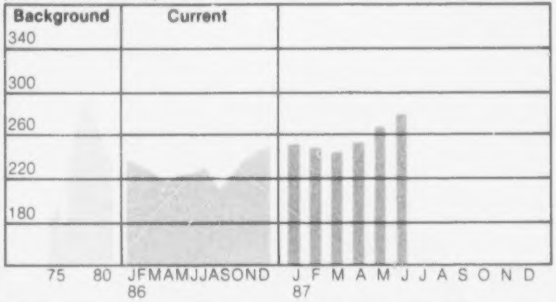
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	11	11	10
Plate (Phil)	10	10	3½
Plate (Chgo)	13½	13½	4½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	11	4½
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	10
Structurals (Chgo)	5	5	4½
Structurals (Hous)	11	11	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	7	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	16
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	1½
Plywood (Chgo)	3	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	3½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	½
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	19	19	13
Aluminum Plate (Chgo)	14	14	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	19	19	13
Brass Castings (LA)	9	9	9
Brass Rods (Chgo)	7½	7½	9
Brass Sheet (Chgo)	11	11	5
Brass Tube (Chgo)	13	13	7
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	4	4	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	4	3	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	9
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	24	24	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	21	24
Pumps (LA)	11	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	4	17
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month 276.3
Month before 272.6
Year ago 225.0

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	19.75	18.25	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	18.25	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	26.90	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.725	.700	.550
Antimony, N.Y., dealer, lb.	1.15	1.18	1.13
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.35
Brass, red, 85%, [sheet], lb.	1.41	1.37	1.28
Brass, yellow, [sheet], lb.	1.36	1.32	1.23
Cadmium, N.Y., dealer, lb.	1.50	1.60	1.04
Copper, electrolytic, wire bars, refd., lb.	.77	.73	.64
Copper sheet, over 24 in., lb.	1.50	1.46	1.37
Lead, common, N.Y., lb.	.400	.350	.220
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	295.00	310.00	239.00
Molybdenum, oxide, dealer, lb.	2.58	2.58	3.00
Nickel, cathode, dealer, lb.	2.18	2.17	1.86
Platinum, dealer, oz.	559.00	582.00	437.00
Silver, N.Y., oz.	7.65	7.82	5.08
Tin, N.Y., dealer, lb.	3.09	3.20	2.58
Zinc, Prime West, East St. Louis, lb.	.460	.450	.415
Zinc, die casting alloy, No. 3, lb.	.525	.495	.475
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.96	16.68	16.33
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	350.00	350.00	310.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.243	.240	.247
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.22	0.94
Cotton middling, 1", N.Y., lb.	.719	.682	.655
Printcloth, 48", 80x80, N.Y., spot. yd.	0.97	0.98	0.72
Army duck, 37", 13 oz., yd.	1.495	1.445	1.480
Blended printcloth, 64", 78x54, yd.	.910	.940	.765
20s combed yarns	1.97	1.88	1.70
Wool 64s, Staple, lb.	2.70	2.70	1.90

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	105.00	105.00	80.00
Benzene, petroleum, tanks, Houston, gal.	1.35	2.50	0.75
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.91	.91	.91
Methanol, sny., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.30	.28	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.295	.270	.270
Polyethylene resin, low density liner film grade (market place), lb.	.315	.315	.265
Polypropylene, homopolymer grade (market price), lb.	.400	.390	.340
Polystyrene, general purpose grade (market price), lb.	.530	.480	.310
Polyvinyl chloride, pipe grade (market price), lb.	.340	.325	.295
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.425	.520	.210
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	134.50	134.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.77	.73
Xylene tanks, gal.	.900	.850	.800
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	329.30	325.60	322.30
Lumber 2x2 pine, mbf, cl	324.65	319.65	315.85
Plywood, plyform, ¾", msf, cl	580.75	577.85	595.95
Plywood, ⅝", msf, cl	384.15	381.60	387.55
Cement, bulk, ton, tl	64.35	63.50	65.56
Sand, ton, cl	7.21	7.14	6.62
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.08	49.00	47.89
Crushed stone, 1½", ton, cl	8.33	8.29	7.83
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.90	0.90	0.83
Gypsum sheathing, ½"x1"x8", msf, tl	238.77	227.00	217.57
Brick, common, per thousand, tl	198.26	192.82	184.96
Asphalt paving, AC-20	132.72	127.31	150.81
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.48	7.15	7.09
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	17.25	17.00	8.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	20.25	19.50	13.20
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.505	.545	.430
Gasoline, 94 oct., reg., Chi., tank car, gal.	.585	.553	.404
Heating oil, No. 2, Chi., bulk, gal.	.540	.530	.355
Heating oil, No. 2, N.Y., bulk, gal.	.553	.510	.348
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.533	.510	.340
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.260
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	83.00	83.00	72.00
Steel, No. 1 hvy., dlvd., Chi., ton	78.00	76.00	70.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.705	.650	.540
Copper, No. 2, East, wholesale buy, dlvd., lb.	.620	.565	.460
Brass, red, East, wholesale buy, dlvd., lb.	.665	.610	.500
Brass, yellow, East, wholesale buy, dlvd., lb.	.345	.345	.300
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.455	.435	.310
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.510	.475	.330
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.170
Lead, clean solids, East, wholesale buy, dlvd., lb.	.275	.230	.130
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	45.00	45.00	15.00
Paper, old corrug. box, dlr., N.Y., ton	25.00	25.00	15.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.11

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Circle 367 on card →

Lean inventories mean good business

Industrial purchasing executives have earned top marks for their efforts to keep inventories trim. Not only are their purchased material stocks low by historical standards, but they've also been heading lower in the past few months.

There's no indication of any change in this overall trend. Total volume of stocks on the shelves could increase fractionally as factory activity continues to edge up. But in terms of days' supply, buyers seem determined to keep holdings at current levels or maybe even bring them down a bit lower.

Odds are that they can do it, too. A new nationwide *PurchasingWorld* survey suggests a continuing trend toward just-in-time delivery systems and increased use of computerization.

But there are other factors at work to limit inventories. There is little concern about availability as capacity in almost all lines is ample. And while some respondents feel there could be a few areas where leads may stretch out, there should be only a few bottlenecks that would prompt laying in extra as insurance.

The still-high cost of carrying inventories is also encouraging the hold-the-line approach. Most buyers put these charges in the 1.5-2%/month range. For some, these costs have actually begun to creep up in line with slightly higher interest rates.

One Midwestern purchasing manager sees new stocking techniques, problem-free procurement climate, and the need to cut costs as signals that there will be continued inventory restraint. Other *PurchasingWorld* survey respondents see these trends shaping up:

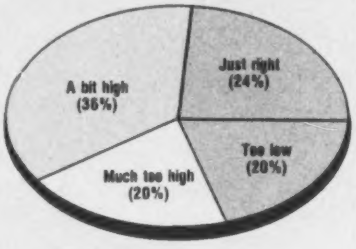
- **Past six months:** Modest shrinkage is suggested by the fact that 40% report days' supply declines since the beginning of the year—well under the 28% noting increases. The remaining 32% say this key ratio has remained unchanged.
- **Current evaluation:** While 20% and 24% rate today's levels as too low and just right, respectively—56% feel that holdings are too high. That's still a big improvement over last September when a similar *PurchasingWorld* survey found 90% of the respondents in the "too high" category.
- **Areas of excessive stocks:** Scattered items are still being mentioned but conspicuous by their absence are steel, nonferrous metals, and electronic components—all sectors that caused considerable concern one year ago.
- **Near-term plans:** Tonnages could be rising to keep up with improving demand. About 44% see increases compared to 24% who predict declines. The remaining 32% believe things will remain the same.
- **Hedging activity:** Some purchases to beat price boosts are reported by nearly half the survey respondents, although the majority add that such hedges are quite modest. Areas involved include plastics, steel, ferroalloys, petrochemicals, titanium dioxide, lumber, and maintenance items. On the other hand, there is absolutely no hedging to protect against possible work stoppages.
- **Lead-time trends:** About 52% of queried buyers have experienced stretchouts over the past six months. More important, 44% feel further lengthening is possible. Products likely to be affected include plastics, aluminum, steel, plastic resins, electronic components, and tooling.

Buyers are also stepping up their attempts to achieve just-in-time (JIT) deliveries. 245 survey respondents say they have already implemented such a system. Another 48% say they are working on one. Of course there are a few holdouts. One PM feels that JIT is not nearly as cost-effective as it is claimed to be. He says there's no such thing as a free lunch and that suppliers are just building the inventory cost into their prices.

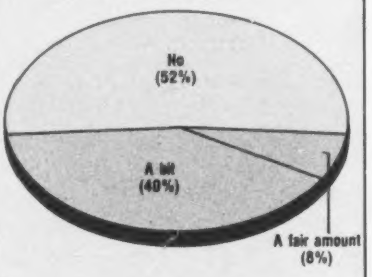
On the other hand, most buyers are attempting to pare stocks by moving toward blanket ordering, more computerization, MRP II, long-term contracts, consignment agreements, better vendor liaisons, and more accurate sales forecasts. As one PM sums it up, "We've cut our days' supply by about 20% over the past two years and hope to knock another 5-10% off overall levels by 1988." **PW**

Inventory trends: Four views

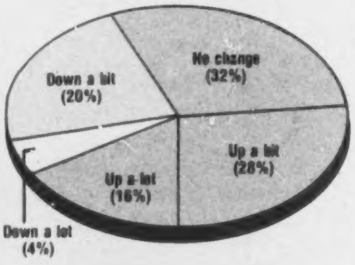
Current status



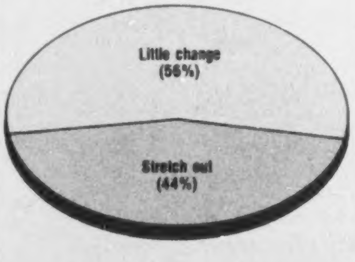
Price hedging



Near-term outlook



Leadtime outlook



Source: PurchasingWorld

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September 1987 Vol. 31 No. 9

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Consultant Jack Kandet cites techniques—including careful rating of shipments—buyers can use to save money on shipping.

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PW PREDICTS

Roberts S. Reichard, executive editor

Bargaining clout continues

Inflationary pressures aren't as muted as last year, but there's still no suggestion of a new upward price spiral.

The dollar seems to be stabilizing. While import prices are still rising, increases should soon begin to taper off—if not over the next few months, then by early next year.

Another fundamental determinant of inflation—labor costs—also suggests that things are under control. Average hourly earnings advanced at an annual rate of 1.9% in the first quarter of 1987 and 3.1% in the second quarter. That's slightly higher than last year—not bad considering the jobless rate has been edging lower. And the trend is likely to continue: Major collective bargaining agreements in the first half of 1987 produced only a 2.1% average first year increase, and only 2.5% annually over the life of the contract.

Even these modest increases are being substantially offset by efficiency gains. Nonfarm productivity is picking up steam again—rising for two straight quarters after staying relatively flat for a year. Even more significant is manufacturing. Recent productivity gains are impressive—3.1% at annual rate in the first quarter and 3.3% in the second quarter. Implication: Unit labor costs for many manufacturers remain relatively stable—not like the late 1970s and early 1980s when annual increases were in the double-digit range.

All the above is not meant to imply a repeat of last year when producer prices actually fell. Energy prices are rising (in contrast to last year's declines) as are other key raw materials sectors such as metals, chemicals, and paper.

Purchasing managers, however, remain optimistic. The latest N.A.P.M. Business Survey Committee report, monitoring buyers from 250 firms, sees average procurement costs rising only 2.3% over the second half of 1987. This suggests some deceleration from the first half when these same PMs said their prices rose an average of 3.4%.

If correct, purchasing executives will experience an overall procurement cost rise of about 5.5% for the 12-month period ending in December. Again, that's not bad considering we are now completing the fifth straight year of business recovery.

The results of a new ***PurchasingWorld*** survey on off-list pricing are also indicative of continued buyer bargaining clout. While bargains aren't quite as easy to find as last year, the typical PM still manages to shave about 6% off his list prices. More than half of those surveyed feel they'll be able to hold onto or improve upon concessions in the year ahead.

What does it all add up to? Barring a new Mid-East blowup, there won't be a big inflationary surge.

Steel

CURRENT SITUATION: Mills are posting new prices— Scheduled to move up are carbon sheet, carbon and high-strength low-alloy plate, stainless sheet and plate, and selected hot-rolled bar rounds. **Whether they stick depends on demand and continuing mill competition.** The proposed hike on ferritic alloy stainless sheet and strip has already been rescinded. Earlier supply tightness is easing.

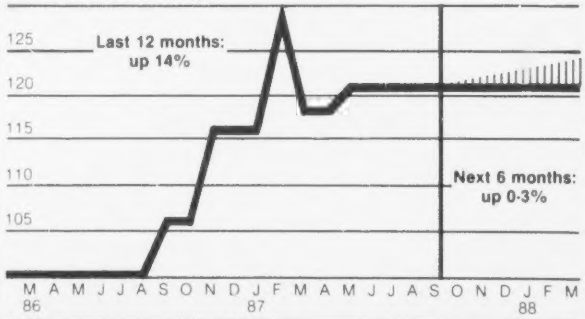
DEMAND: The lackluster pattern is likely to continue. Second half domestic shipments will total only 32-33 million tons vs. the first half 36 million tons. **Only 68-69 million tons will clear the market in 1987** because of disappointing demand from construction and autos. But appliances remain strong and equipment is holding its own. **No dramatic change is likely in 1988.**

SUPPLY: Rising mill potential—reflecting full-scale USX output and resolution of production problems at other mills—suggests an easier supply and falling lead-times. The AISI capability utilization index shows that operating ranges will continue in the 70-80% range. One analyst estimates that the domestic industry would have to cut capacity by 15-20 million tons before any real long-lasting market balance could be achieved. Imports account for about 22% of apparent consumption.

PRICE OUTLOOK: Spotty weakness can't be ruled out by late fall or winter—despite recently posted increases. The supply situation is improving as demand may be edging lower. Some steel users may have overbooked recently—leading to possible cancellations. **The recent increases in flat-rolled products are not likely to hold.** In 1988, the industry will do well to match the anticipated 4% increase in overall industrial prices.

Cold rolled steel sheet (Market price)

(Index June 1985 = 100)



R&D still ranks high

Research and development is still high on the list of management priorities.

This year, U.S. firms (as reported in a new DRI-McGraw-Hill survey) plan to shell out $87 billion—nearly 5% more than they spent in 1986. Even subtracting 3% for higher prices, there's still room for a real gain of 2%.

Chances are the trend will continue beyond the current year. Preliminary plans, which are normally underestimated because they aren't always finalized so far in advance, call for an additional 4% increase over the 1988-1989 span.

Although these are smaller gains than noted over the past decade, they are nevertheless significant. Combined with the weaker dollar, they should make our products more competitive in domestic and world markets.

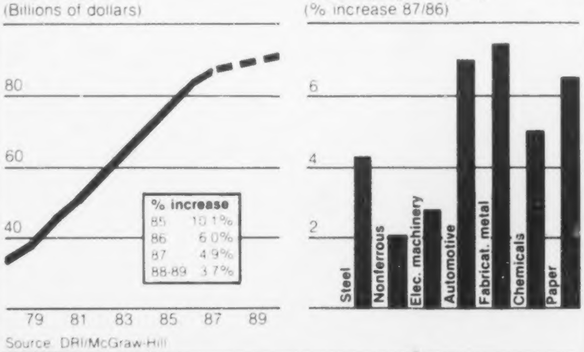
The encouraging R&D picture can also be appreciated by looking at the R&D/sales ratio. This year, the typical firm plans to spend 3.5% of its sales dollars on R&D. That's the same as last year and well above the 2.1% low hit in 1977 and 1979.

R&D also looks quite favorable when compared to capital investment. This year, a 22.3% R&D investment ratio is anticipated for all U.S. business—fractionally above last year and well above the 15% low in 1979.

But R&D averages tell only part of the story—there are substantial industry-by-industry variations. On a pure dollar volume basis, the aerospace and electrical machinery sectors lead the pack—matching each other and together accounting for 44% of total outlays.

On a percentage basis, aerospace (with a targeted 5.8% dollar increase for 1987) is far larger than the anticipated machinery gain. Other bigger-than-average 1987 dollar gains are projected for autos (7%), fabricated metals (7.5%), instruments (6.3%), paper (6.4%), rubber and plastics (11.2%), and petroleum (15.3%).

R&D spending: Two views



Overall trend
(Billions of dollars)

Industry-by-industry
(% increase 87/86)

Source: DRI/McGraw-Hill

Computers

More competition seems to be shaping up in PCs as new models hit the market. IBM's new PS/2 Model 25—aimed at the education market—is listed at $1,350-1,695. But IBM has intimated that the more expensive model can be had for 40% off list. Tandy has introduced a powerful new Model 4000 (based on the 80386 microchip) which is priced at about 20% under similar machines from IBM and Compaq. The company has also introduced its first IBM-compatible laptop (the 1400LT) priced at $1,400, which will compete with models from IBM and Toshiba.

Electronic components

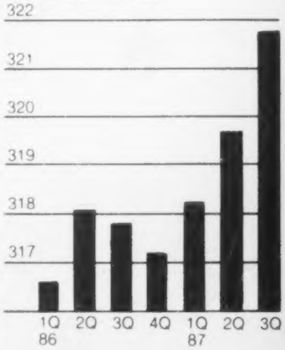
Don't expect any major runup—at least as far as overall price averages are concerned. Best bet: about a 3% increase over the next 12 months. Reasons: 1) OEM demand increases will be relatively moderate, 2) capacity utilization rates aren't that high, 3) material and labor cost pressures remain muted, and 4) international competitive forces still have to be reckoned with—as non-Japanese competitors on the Pacific Rim try to increase their market shares.

Methanol

Prices continue to firm. Reason: A combination of 1) good demand from formaldehyde and MTBE users and 2) snug supplies. If there were a plant problem, things could really turn tight. In any event, quotes which were in the 30-32¢/gallon range as recently as June, are now up as high as 34¢/gallon. And another increase can't be ruled out over the next month or so (into the mid-30s range)—as demand begins to show its normal seasonal pickup.

Building products

A mixed picture here—overall prices for materials and components for construction are expected to be only about 1% this year. Cement markets, in particular, continue to be weak both because of a leveling off in construction activity and import competition. At latest report, the material was fetching fractionally less than a year ago—with the average quote put only in the $64/ton range. Lumber has been holding up well—despite some falloff in housing starts. Thus spot tags for 2x4s are still close to 10% above a year ago. But some declines are likely here once the summer building season ends.



Building materials and components
(Index: 1967 = 100)

PW PREDICTS

Paper

CURRENT SITUATION: Prices are edging higher. Witness 1) a $60/ton boost in coated groundwood to $720/ton, 2) a $40-60/ton increase in coated free sheet, 3) a $40/ton advance in newsprint to $570/ton, and 4) a $40/ton increase in uncoated xerographic papers. **Behind these advances: operating rates in the 90% + range and continuing strong demand.** Production in most paper and board sectors is running ahead of last year's levels—with unbleached linerboard leading the advance at 6%.

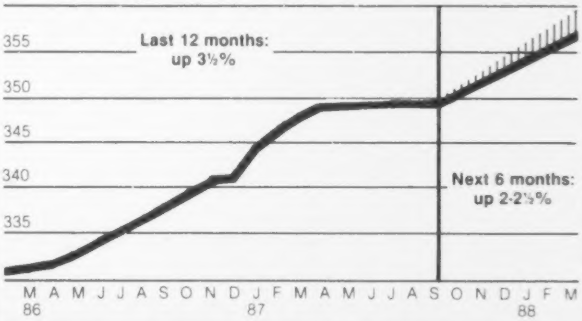
DEMAND: Gains should continue—pushing the overall 1987 paper and board production total to above 73 million tons—up 3% from 1986. Consumption (including net imports) will be 80 million tons, up 3%. Exports could be up 8%. Some production advances seen for 1987: Unbleached kraft linerboard (3%), solid bleached board (3%), recycled board (2.5%), newsprint (2%), uncoated groundwood (2%), uncoated free sheet (4%), coated papers (3.5%), and unbleached kraft paper (1%). **Preliminary signs for 1988 point to a bigger 3.5% overall output gain.**

SUPPLY: There should be enough—as the industry announces almost a million tons of new capacity for 1988-1989—over and above the 2.5 million ton increase indicated in last fall's American Paper Institute survey. But operating rates will remain high. Only coated papers are in more than ample supply—reflecting recent new capacity additions.

PRICE OUTLOOK: Most of the boosts above will hold. Chances are that mills will also push for a $30/ton linerboard hike—something which could put additional upward pressure on corrugated boxes. But then prices will begin to level off—with overall tags expected to be up by only 2-2.5% by early next year. The estimated increase for 1988 should not be more than 3.5%—except for corrugated which could advance by 5%.

Paper & product prices

(Index 1967 = 100)

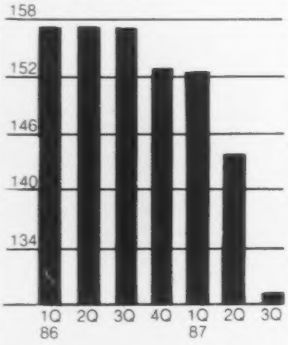


Sulphur

Prices have dropped for the second time this year—with a $7/ton reduction bringing prices down to around $127/ton FOB Tampa. This has occurred despite good demand—consumption so far this year has been running 8% above 1986 levels. Probable reason: The lower Canadian prices of recent months. But the trend could be reversed soon since Canadian quotes have begun to rise about $8/ton (to $100) in recent weeks. Also indicative of a possible upward shift: a strengthening fertilizer industry, especially in exporting where an increase of 600,000 tons of product is projected for 1987.

Sulphur

(FOB Tampa $/ton)



Aluminum

Prices continue to edge up. Ingot now commands about 75¢/lb. And recent boosts have been posted on extruded products and some auto sheet items. Producers have shifted to a price-at-time-of-shipment policy, too. Behind the firmness: snug supplies, with North American stocks down 11% over 1986. Demand has been firm, too—with U.S. shipments expected to rise 2% this year, to 15.75 billion pounds. But counterbalancing this are plans for higher North American output as mothballed potlines come back on stream.

Copiers

Look for fall introduction of digital full-color models that combine the technology of digital scanning, laser printers, and existing color office copiers. Cost of these machines, which are capable of high-fidelity color copying, is put at around 50¢/page, well under a slower photographic process that costs up to $1/page. The new machines will range in price from $10,000-35,000; demand should be brisk. By 1990, according to Dataquest, an electronic research firm, sales should be running around 20,000 machines per year.

Tantalum/ columbium

Prices are heading up. In the tantalum sector, higher ore quotes have made for about 4.5% average increases in sheet, wire, rod, bar, and tubing. And more advances are possible—with ore producers expecting a $25/lb tantalite quote before long—considerably above the current $19-22/lb range. Columbium and columbium/1% zirconium products are up by 6.5%.

Circle 361 on card

Machine tools

Cut-throat competition is still the order of the day—as low import quotes persist. One reason is the substantial volume of foreign inventories in the country when voluntary restrictions went into effect last year. These inventories are still in the process of being worked off. Official import prices are up, but they don't always reflect actual transaction levels. Some Japanese firms are reportedly still trimming nearly 35% off prices for large machining centers that list for $380,000.

Copper

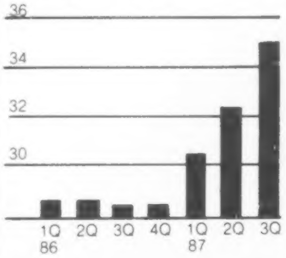
The first sustained rally in years has pushed the red metal up into the low 80s—the highest price in four years. Behind the advance are reduced inventories (stocks in Comex and IME warehouses are at their lowest levels in several years) and good demand from brass mills and wire and cable fabricators. Then, too, there have been some temporary shortages in spot metal and secondary material. Output is beginning to rise, so inventories should stabilize and perhaps begin to rise by yearend. Prices aren't likely to advance much further—and could well edge down before the year is out.

Textiles

The trend up the price ladder continues. Wool fabric quotes are spearheading the advance—as sharply higher raw wool prices make for increases ranging anywhere from 5-27%. Biggest boosts here are in the fine worsteds—the kind that go into suit fabrics. Cotton fabrics are also more expensive as higher import and raw cotton prices (now in the 70s) put upward pressure on the market. Some synthetic fibers such as rayon staple, selected nylon filaments, and spandex have also increased.

PVC pipegrade

(market price ¢/lb)



Polyvinyl chloride

Another 1-2¢/lb increase has pushed the pipe grade up into the 36¢/lb range—far above the 28¢/lb low of late 1986. Other grades are up, too—the general purpose suspension grade is at 37¢/lb and the film-wire-cable grade is at 38¢/lb. Behind the advance: rising chlorine costs and good demand, which is expected to be up at least 5% this year. Supplies remain adequate—as reduced bottlenecking in several plants brings nameplate capacity up to more than 8.7 billion lb this year (vs. 8.4 billion in 1986)—enough to prevent operating rates from rising above 90% for the year as a whole.

Plastics outlook

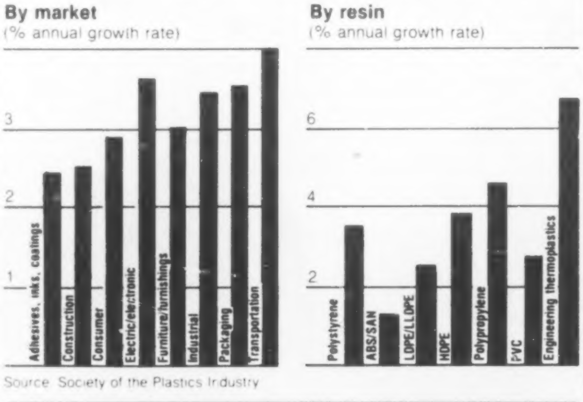
Figure on buying more plastic resins for production in the years ahead.

The 3.1% gains anticipated for the next 15 years won't be as spectacular as the 6.3% annual growth rate from 1970-1985. But it still adds up to a lot of material. By 2000, 75.6 billion lb of these versatile synthetics should clear the market—58% over the estimate for 1985.

The new projections, prepared by Chem Systems for the Society of the Plastics Industry, show virtually every industry sector and key resin sharing in the continuing gains (see chart). Some of the study's more important observations and conclusions:

- Plastics will continue to make significant inroads in nondurable goods—e.g. packaging—at the expense of glass, paper, and metal.
- Resins should continue to replace traditional materials in consumer durables, making inroads in structural and semi-structural applications. Plastics will be increasingly used in initial designs—especially for automotive body panels and components (e.g. fascia, air dams, headlights, and spoilers).
- More emphasis on alloys, blends, additives, polymer modification in the reactor, and composites will enable firms to design polymers for individual applications, further stimulating substitution.
- Plastics fabrication machinery should reach $1.4 billion by 2000—an average annual growth rate of 5.1%.
- Thermoplastics with large-volume growth include polyethylene, polypropylene, PVC, and polystyrene. On a percentage basis, engineering plastics (projected to grow 6.6% annually) will lead the pack.
- The U.S. will be the principal geographic region for the next round of expansion in commodity plastics. But Asia will be a site for new engineering plastics plants.

Plastic demand trends through 2000


By market (% annual growth rate)

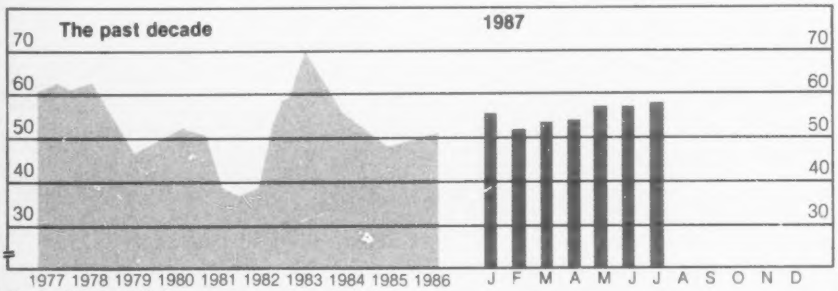
By resin (% annual growth rate)

Source: Society of the Plastics Industry

BUSINESS DATATRAK

N.A.P.M. business barometer

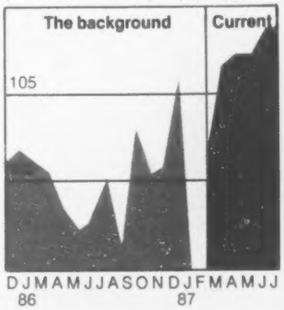
Based on five indicators (employment, inventories, new orders, production, vendor performance)



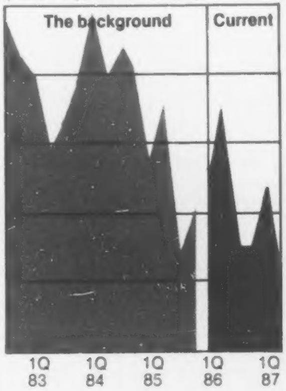
Source: Commerce Dept.

Leading indicators

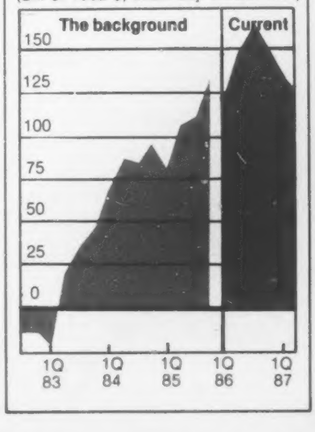
1. Durable goods orders
(Bil. of $, seasonally adjusted)



2. Savings ratio
(% of disposable income)



3. Real net imports
(Bil. of 1982 $, seas. adj. annual rate)



KEY ECONOMIC TRENDS

Slowly but surely upward

Next month will be a milestone—the 59th consecutive month of business expansion. This is an all-time high for peacetime.

There is nothing looming on the horizon to indicate any imminent change. Thus the N.A.P.M. Business Barometer, a time-tested indicator of activity one and two quarters ahead, continues to rise (see chart). Last month it moved above 58—more than 8 points above the neutral 50 mark and the highest in over three years.

Several factors contribute to this bullish reading. Plant and equipment spending seems to be bottoming out—partly because the initial negative impact of tax reform has subsided and partly because of higher profits. The latter, expected to be up more than 10% this year, should provide the wherewithal and psychological impetus for more capital spending.

New orders are also looking up. Bookings have been stable for six months, assuring additional gains in factory output over the upcoming fourth quarter.

Consumer demand leaves something to be desired—particularly in the auto sector where sales this year aren't likely to top 10.3 million units. That's more than 10% under last year's 11.6 million total.

Big ticket items such as appliances seem to be moving well. The same is true of other goods—as the typical family saves only 3.2% of its take-home pay (see chart). That's one of the lowest percentages in history.

Moreover, there's little to indicate that this rate will rise above 4% soon. Combine this with the current year's projected 5% rise in disposable income, and it virtually assures continuing gains in overall retail sales.

The international trade picture has also turned more favorable—at least as far as its contribution to GNP growth is concerned. Real net imports are now in a falling trend. This fact cannot be underestimated. More than 40% of the nation's real growth since last year is attributable to this trade shift.

Inventories are also encouraging. As of latest report, they were surprisingly trim on the factory level—with the key stock/sales ratio in the 1.6 range, unchanged from year-earlier readings.

The implication is clear: Most of the new increase in orders alluded to earlier will be quickly translated into new production, thus further priming the pump.

That's why ***Purchasing World*** projections call for a 3% rise in industrial production in the months immediately ahead. While hardly spectacular, this is considerably above the 2.3% rate noted over the first six months of this year.

This is not to say that the economy will be problem-free. The huge budget deficit could easily edge higher again in fiscal 1988. And there's continuing uncertainty about oil. Consider also that the current business upswing is entering its sixth year—nothing goes on forever.

Nevertheless, there is little to indicate a major change in direction. Barring the unforeseen, the economy should continue its slow climb through 1987 and into 1988.

Electronics surges upward

Electronic equipment demand should increase 8% or more this year—far above last year's anemic 1% advance. And production gains may hit double digits in the commercial sector (computers, communication equipment, etc.).

This rosy forecast by Henderson Ventures carries over into 1988, too. Analysts at the Los Altos, CA, market research firm see a 12%+ overall gain for next year.

Within the fast-growing commercial sector, computer and office equipment-related items are likely to perform best. Watch for an 11.4% gain this year. New products by IBM and DEC are expected to act as a demand spur. But it will not be until 1988 that capital spending sufficiently recovers to provide an enthusiastic response—about 15% is estimated—to the new offerings.

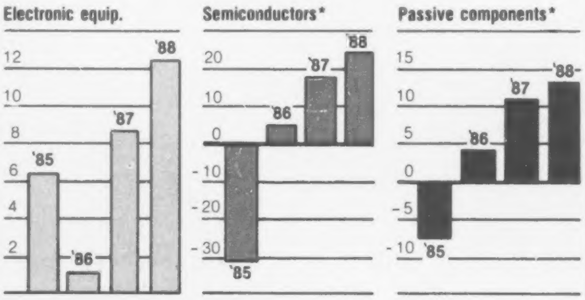
Elsewhere in the commercial sector, communications apparatus won't fare badly either. This year's 8.4% advance will accelerate to over 13% in 1988. Ditto, industrial equipment and instruments where gains of 10.4% and 15.8% are seen for 1987 and 1988.

The outlook for noncommercial items is more mixed. While consumer items are expected to move well—up 9.3% and 15.8% in 1987 and 1988—military equipment over the same two-year period will show little more than a 4% average annual gain.

All this suggests double-digit growth for the electronic components that go into all these products. Henderson Ventures pegs merchant market semiconductor growth at around 19% this year—and at 24% for 1988.

Electronics demand heads higher

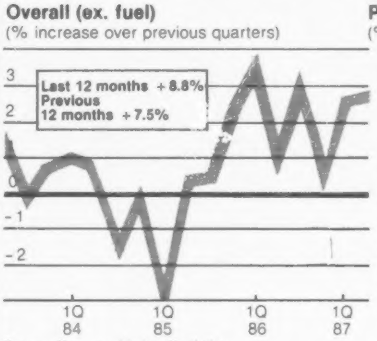
(% increase in current $ terms)



* Merchant market purchases

Source: Henderson Ventures

Import prices: the trend is still up



Source: Bureau of Labor Statistics

Product by product

(% increase over past year)

Textiles	5.6
Steel bars, rods, shapes	5.4
Fasteners	8.8
Tools	5.4
Elec. motors and gener.	11.3
Textile mchy.	20.8
Printing mchy.	20.9
Metalworking mchy.	17.1
Heating and cooling eqpt.	6.6
Pump & compressors	11.7
Mechanical hand. eqpt.	19.0
Bearings	6.2
Office mchy.	5.0
Elec. mchy.	8.3
Autos	8.6
Electronic compon.	3.8

The picture is similar for passive components, though the rates of growth are lower. Purchases this year are projected to rise 10.7%—to be followed by a 14% advance in 1988.

Import prices reflect dollar's drop

Import prices continue to creep up—reflecting the lagged effects of the steady dollar devaluation since 1985.

Even if you remove the distorting impact of recent oil boosts, the increase over the latest 3-month period comes to 2.6%. And over the past year, the advance has been close to 9%.

Compare that to the much smaller rise in domestic producer prices over the same period, and it suggests that import bargains may be harder to find.

A more detailed import price rundown for the latest quarter (April to June) follows:

- **Chemicals:** The overall advance came to 3%—similar to the previous quarter. The year-to-date rise in this index contrasts with the steadily declining prices over the previous three years and is attributable to price rises in oil-based organic chemicals.
- **Intermediate products:** Quotes jumped 3.7%—and have increased 8.7% over the past year. Nonferrous metals, led by silver, were up 10.3% over the last three months. And iron and steel rose 3.9%, following a 3.2% 1Q gain. Large boosts were also posted for cork and wood (5.1%), non-metallic mineral manufactures (3.9%), and leather (4.7%).
- **Machinery:** Prices rose 1.8% compared to a 3.1% increase over the previous quarter. Road vehicles were up 1.6% vs. 2.9% in the first quarter. Also decelerating were general industrial machinery (2.1% vs. 5.8%), and electrical machinery (1.3% vs. 2.1%). But office machinery and telecommunications equipment showed somewhat larger 2Q increases.
- **Miscellaneous manufactures:** Increases over the past quarter were noted for plumbing, heating,

and lighting fixtures (4.1%), professional and scientific equipment (3.1%), photo apparatus, optical goods and watches (2.3%), and furniture (.5%).

The biggest increases were in the energy sector, which jumped 10.3% during the second quarter. This follows even larger 14.3% and 29.4% boosts for the previous two quarters. This area is now sporting import prices some 46% ahead of a year earlier.

CURRENT PRICES

Energy boosts prices

Industrial producer prices accelerated last month. Much of the impetus can be traced to energy—though this time some modest boosts were also posted in metals, textiles, petrochemical derivatives, and some paper products.

Most analysts, however, are not concerned. They think the energy increases could be about over. Ditto those posted on nonferrous metals. More important, despite these recent advances, overall industrial averages are up only 4.5% *vis a vis* year-earlier levels.

The year-to-year increases are heftier in the energy and nonferrous metals sectors, where current tags are up 14% and 12%, respectively. But keep in mind that both these areas were extremely depressed last year. In both cases, quotes are still well under highs of a few years back.

A more detailed rundown on specific changes over the latest 30-day period follows:

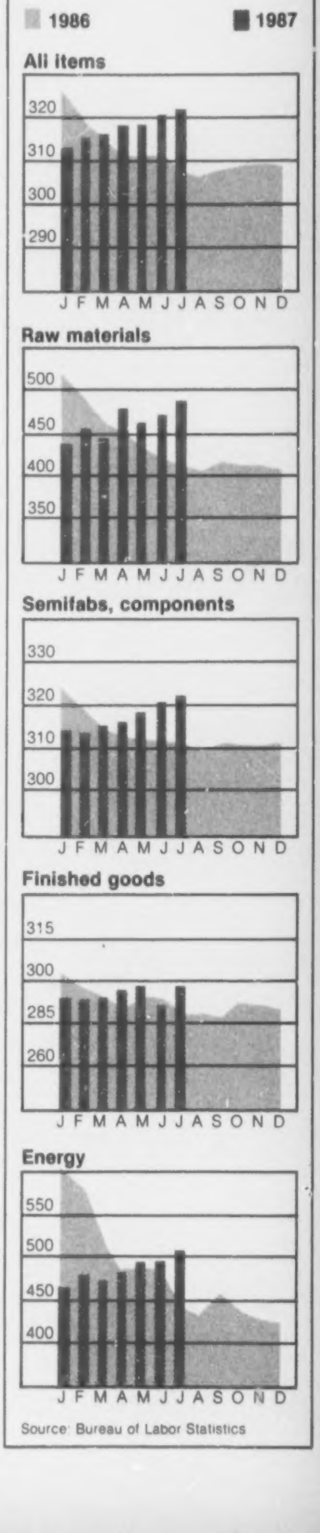
- **Energy:** Prices moved higher in almost all areas—including crude oil, gasoline, residual fuel, home heating oil, jet fuel, liquid petroleum gas, and electric power. The only exceptions were natural gas and coal, where small declines were noted.
- **Metals:** All major nonferrous metals—including lead, copper, aluminum, and zinc—were sharply higher. Ditto nonferrous mill shapes and most metal scrap. Steel, however, remained relatively unchanged, though some increases are scheduled over the next month or so.
- **Other durable materials:** On the up side were electronic components, nonferrous wire and cable, and lumber. But metal containers, hardware, and motor vehicle parts all edged lower.
- **Nondurable materials:** Industrial chemicals were

This month's breakdown

	Latest level (July)	% change from: Month ago	Year ago
Bearings	356.8	0.3	−0.1
Bolts, nuts, etc.	278.5	0.0	0.6
Chemicals, inorganic	294.7	1.1	0.2
Chemicals, organic	360.9	−1.4	11.7
Concrete products	326.0	0.1	0.1
Corrugated cartons	296.3	0.2	12.3
Cutting tools, small	293.1	0.0	0.3
Electric lamps (bulbs)	347.5	0.0	0.0
Electronic components	204.0	1.1	0.8
Fans and blowers	370.7	0.2	1.4
Foundry and forge products	363.7	0.0	0.0
Fuel oil (residual)	688.5	5.8	58.6
Furniture, commercial	326.6	−0.1	2.6
Gasoline	414.9	2.6	31.0
Glass, flat	237.6	0.2	1.7
Glass containers	402.1	0.3	0.2
Gypsum products	316.9	−3.5	−9.4
Hand tools	395.7	0.2	3.2
Hand tools, power driven	240.7	−0.4	1.2
Industrial furnaces	402.2	0.0	1.8
Integrating and measuring instruments	240.9	0.5	2.3
Internal combustion engines	359.2	0.1	1.5
Lubricating oil	345.1	−1.0	−7.6
Lumber millwork	331.4	0.5	3.3
Material handling equipment	294.4	0.2	0.8
Metal containers	357.7	−0.7	−1.3
Metal mill shapes (nonferrous)	321.1	3.3	7.1
Metal tanks	303.5	1.3	1.4
Motors and generators	357.0	0.4	1.2
Motor trucks	319.4	0.2	4.3
Office and store equipment	158.9	0.1	2.8
Paperboard	296.3	0.4	8.9
Paper boxes and shipping containers	287.2	0.2	7.3
Paper office supplies	242.3	0.0	1.8
Paint	283.8	−0.1	0.4
Plastic resins	324.2	4.0	9.3
Precision measuring tools	279.2	1.6	4.2
Pumps and compressors	366.9	0.3	1.4
Refractories	374.4	0.5	0.5
Rubber belts and belting	327.9	−2.2	−3.5
Scales and balances	234.3	0.1	1.3
Steel products	353.1	0.1	1.5
Switchgear	291.4	−0.4	2.2
Textiles, synthetic fibers	148.1	0.4	−1.2
Textiles, gray fabrics	158.0	2.0	4.4
Tires and tubes	232.2	0.5	−0.5
Transformers and power regulators	235.8	0.7	1.2
Welding equipment	305.6	0.6	1.1
Wire and cable	210.4	1.5	2.3

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics

down—sparked by declines in benzene and styrene. So were inedible fats and oils, gypsum products, and rubber belts and belting. But offsetting these were increases in plastic resins, paint materials, synthetic fibers, gray goods, synthetic rubber, and much of the paper sector (including fine papers, paperboard, and paper boxes).

- **Machinery:** Averages edged up only 0.1% over the month. But there were some notable increases in individual lines—namely precision measuring tools, transformers and power regulators, welding machinery, and integrating and measuring instruments.

STEEL SCENE

Bears brake demand

A modest leveling off in steel demand may be in the making by early fall.

That's not only being suggested by ***Purchasing-World***'s own industry analysis, but by people at the grass roots level—industry buyers and distributors. As of now the latter, responding to a Steel Service Center Institute (SSCI) survey, are equally divided between those anticipating demand decreases and increases in incoming orders balance at 22%. The remaining 56% see little or no change.

Steel buying PMs are even more bearish. Replies to a similar question suggest that one out of four plans on a drop-off in his or her steel receipts over the next three months—far outweighing the 11% who feel some increases may be in order.

One reason for this is the flattening in construction and autos—two of steel's key markets. In the auto area, there's also a possibility of a strike. And many analysts predict that even if a strike is prevented, high auto inventories and an anticipated decline in car sales will force a retrenchment of auto production and therefore of steel consumption.

An inventory shift is still another possible braking influence on demand. An impressive 46% of steel buyers surveyed contemplate cutbacks in their steel holdings—nearly six times as many as the 8% who want to increase their stocks of the metal.

But it's doubtful whether this is realistic. Buyer inventories are currently equivalent to 1.82 months' supply—pretty close to the low of a month earlier and well under the near 2-month levels prevailing as recently as this past spring.

Another interesting survey finding: Service centers expect higher prices ahead. Right now, 9 out of 10 feel steel replace-

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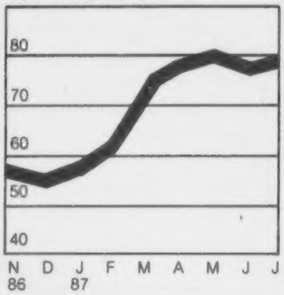
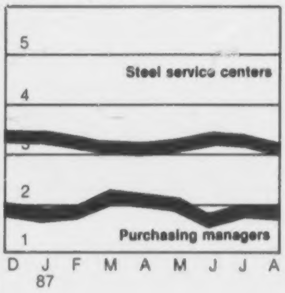
BUSINESS DATATRAK

Steel

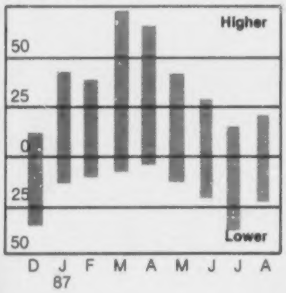
Operating rates



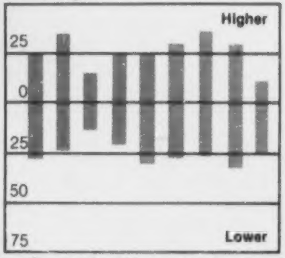
Inventories
(Months supply on hand)



Demand
(Percent of respondents)
Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 23%
SAME 48%
SLIGHTLY BELOW 29%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 6%
SAME 84%
5-10% BELOW 8%
10-20% BELOW 2%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

ment costs will be higher six months from now—12% put the advance in the 5%+ range.

One possible reason for this rising service center price forecast could be lessening competition from imports. Only 10% of surveyed distributors report imported carbon steel prices under comparable levels at this time. That compares to 34% in late 1986 and marks the lowest such percentage in years.

And the same diminishing import price advantage is seen for stainless, where only 26% now report lower-than-U.S. figures, compared to 75% last December and 90% a year ago.

Steel buyers, too, report less import price competition. Only 29% note price breaks now (vs. 37% late last year). And not one single respondent dubs the advantage as "substantial."

Nor is import price competition likely to heat up again. According to 7 out of 10 distributors, overseas mills are now actually less active in seeking new business. And buyers, responding to a similar question, agree.

But even with reduced import competition, the higher price tags projected by service centers for the next six months may not be attainable, because of the expected leveling off in demand alluded to earlier. This suggests that much of today's supply snugness (mainly in plate, hot-, cold-rolled, and coated sheet) is likely to disappear—thereby making it harder to post a significant price increase.

Factoring this demand variable into their equations, most econometric forecasting firms are now calling for only a few percentage points rise in steel prices over the next few quarters.

PROCUREMENT STATUS

No problems in sight; supplies in control

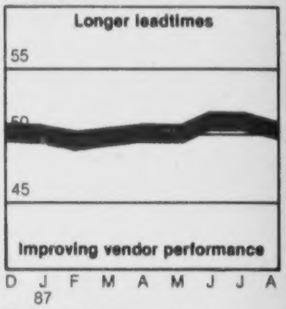
Leadtimes seem to be stabilizing after the slow rise of the last few months.

The N.A.P.M. Business Survey Committee reports that slower deliveries still outnumber faster ones. But the group goes on to add that much of this may be due to shortages in steel following the lengthy USX strike last year.

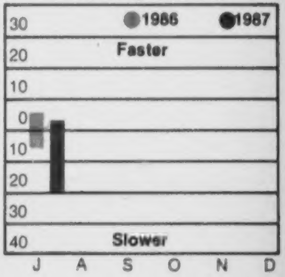
In any event, with these shortages expected to begin disappearing, it's hard to see any further deterioration in overall delivery performance. Also on a rosier note—***Purchasing-World***'s leadtime index (a compilation of more than 150 product lines) has

Monthly procurement status report

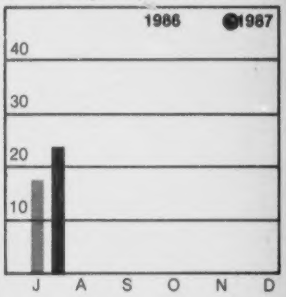
Leadtime index
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



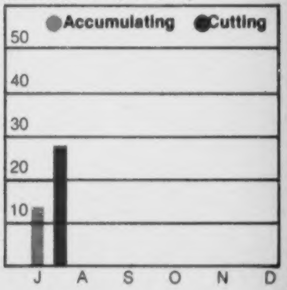
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

leveled off at the neutral 50 mark following four consecutive small monthly advances.

Still other indications that the procurement picture is now under control:

- Some 56% of queried buyers are now committing 30 days or less in advance for their production materials—about the same percentage noted in recent months.
- Inventory paring is again the order of the day, reversing the slight tendency toward accumulation noted last month. Obviously not too many PMs are concerned about stockouts.
- Only two items (aside from steel sheet and plate) are said to be in short supply—styrene and caustic soda.

Also indicative of adequate supplies ahead is the fact that the nation's industrial purchasing executives do not intend to cut back on imports—despite recent price hikes. For the remainder of the year, some 24% actually expect to step up their purchases and another 55% anticipate no appreciable change.

No big demand gains threaten to upset today's problem-free procurement environment. Preliminary indications suggest that fourth quarter production schedules will be increasing at only a 2-3% annual rate—hardly the type of gain to tax suppliers, many of whom are still saddled with excess production capacity.

Leadtimes and availability

Chicago: Minor shrinkages are noted. Included (in weeks) are offset paper (4-8), specialty text paper (6-8), sodium bichromate (½), and common process stearates (5). Previously extended steel leads are holding. Modest price hikes, too—in mill supplies and hardware.

Cleveland: Corrugated boxes have come in a week (to 2-3), and natural kraft is now available on demand. Ditto, most alloying materials, plastic shrink film, strapping, and steel drums. Other drums (2-ply fiber and steel canisters) can be had in 2 weeks. Ditto most lumber items, paint, and plastic resins.

Los Angeles: Moving out (to new weekly leads) are pumps (11-12), foreign fasteners (18-20), and custom seals and gaskets (5-6). Cardboard cartons have come in (to 3-5). No changes in galvanized steel (12-14), grey iron castings (6-8), brass castings (10-12), and aluminum tubing (4-6).

Houston: Several items are moving into the upper ranges of their leads—with possible stretchouts ahead. Included here are high-pressure heat exchangers, alloy and carbon steel exchangers, and shop fabricated steel pipe (both carbon and alloy). Extensions are also possible in component parts.

Philadelphia: Standard bronze valves have come in fractionally (to 5-6 weeks). Other weekly leads, basically unchanged, are: standard bearings (stock to 4), specialty bearings (12-14), standard fasteners (stock to 6), special fasteners (8-10), specialty FHP motors (10-12), and general usage electric meters (12).

Pittsburgh: These leads (in weeks) are typical: most alloying metals (2)—except for nickel (3) and zinc (4), mill quantities of copper products (4), polyethylene and PVC (5-6), paint (4-5), steel strapping (2-3), and lumber and corrugated boxes (3-4).

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BUSINESS DATATRAK

Leadtimes (in weeks)	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	11	11	10
Plate (Phil)	10	10	3½
Plate (Chgo)	13½	13½	4½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	11	4½
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	10
Structurals (Chgo)	5	5	4½
Structurals (Hous)	11	11	17
Tubing (Phil)	5½	5½	5½
Grey Iron Castings (LA)	7	7	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	16
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	9
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

LUMBER	Now	Month ago	Six months ago
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	1½
Plywood (Chgo)	3	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	½	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	½
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	19	19	13
Aluminum Plate (Chgo)	14	14	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	19	19	13
Brass Castings (LA)	9	9	7
Brass Rods (Chgo)	7½	7½	9
Brass Sheet (Chgo)	11	11	5
Brass Tube (Chgo)	13	13	7
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	4	4	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	4	4	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	48
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	7
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	21	21	21
Heat Exchangers, Hi-pressure (Hous)	24	24	26
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	21	24
Pumps (LA)	11½	11	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	4	17
Welding Supplies (Hous)	5	5	5

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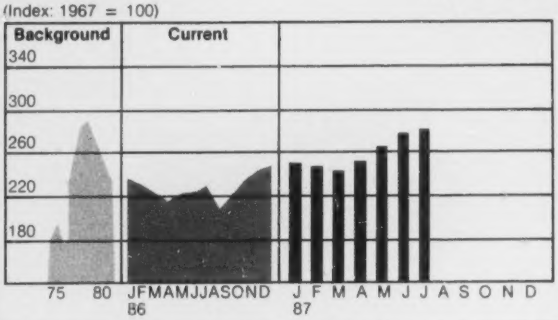
BUSINESS DATATRAK

Raw material price barometer

Latest month 283.5
Month before 276.4
Year ago 227.6

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	26.90	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.765	.725	.543
Antimony, N.Y., dealer, lb.	1.06	1.15	1.06
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.65
Brass, red, 85%, [sheet], lb.	1.47	1.41	1.27
Brass, yellow, [sheet], lb.	1.42	1.36	1.22
Cadmium, N.Y., dealer, lb.	1.45	1.50	1.00
Copper, electrolytic, wire bars, refd., lb.	.83	.77	.63
Copper sheet, over 24 in., lb.	1.56	1.50	1.36
Lead, common, N.Y., lb.	.42	.40	.22
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	300.00	295.00	190.00
Molybdenum, oxide, dealer, lb.	2.75	2.58	3.00
Nickel, cathode, dealer, lb.	2.32	2.18	1.82
Platinum, dealer, oz.	630.00	559.00	541.00
Silver, N.Y., oz.	7.76	7.65	5.39
Tin, N.Y., dealer, lb.	3.04	3.09	2.55
Zinc, Prime West, East St. Louis, lb.	.47	.46	.44
Zinc, die casting alloy, No. 3, lb.	.525	.525	.475
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.98	17.01	16.34
Shipping sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	350.00	350.00	310.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.240	.243	.229
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.22	0.94
Cotton middling, 1", N.Y., lb.	.734	.719	.265
Printcloth, 48", 80x80, N.Y., spot. yd.	0.97	0.97	0.70
Army duck, 37", 13 oz., yd.	1.495	1.495	1.450
Blended printcloth, 64", 78x54, yd.	.94	.91	.74
20s combed yarns	1.98	1.97	1.70
Wool 64s, Staple, lb.	2.70	2.70	1.90

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	105.00	105.00	80.00
Benzene, petroleum, tanks, Houston, gal.	0.95	1.35	0.68
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.81	.91	.91
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.32	.30	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.295	.295	.270
Polyethylene resin, low density liner film grade (market place), lb.	.345	.315	.255
Polypropylene, homopolymer grade (market price), lb.	.440	.400	.330
Polystyrene, general purpose grade (market price), lb.	.535	.530	.330
Polyvinyl chloride, pipe grade (market price), lb.	.340	.340	.300
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.400	.425	.210
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	134.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.77	.73
Xylene tanks, gal.	.82	.90	.80
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	331.50	329.30	317.70
Lumber 2x2 pine, mbf, cl	334.10	324.65	311.75
Plywood, plyform, ¾", msf, cl	585.15	580.75	592.05
Plywood, ⅝", msf, cl	389.00	384.15	385.50
Cement, bulk, ton, tl	64.25	64.35	64.43
Sand, ton, cl	7.17	7.21	6.62
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.08	49.08	48.01
Crushed stone, 1½", ton, cl	8.28	8.30	7.80
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.90	0.90	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	228.23	228.77	217.57
Brick, common, per thousand, tl	198.26	192.26	185.51
Asphalt paving, AC-20	132.97	132.72	145.53
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.51	7.48	7.23
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	17.25	17.25	8.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	21.75	20.25	13.50
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.600	.505	.405
Gasoline, 94 oct., reg., Chi., tank car, gal.	.605	.585	.460
Heating oil, No. 2, Chi., bulk, gal.	.567	.540	.445
Heating oil, No. 2, N.Y., bulk, gal.	.585	.553	.430
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.540	.533	.400
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.245
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	89.00	83.00	76.00
Steel, No. 1 hvy., dlvd., Chi., ton	83.00	78.00	76.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.735	.705	.540
Copper, No. 2, East, wholesale buy, dlvd., lb.	.650	.620	.460
Brass, red, East, wholesale buy, dlvd., lb.	.695	.665	.500
Brass, yellow, East. wholesale buy, dlvd., lb.	.365	.345	.310
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.490	.455	.325
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.555	.510	.345
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.170
Lead, clean solids, East, wholesale buy, dlvd., lb.	.275	.275	.120
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	40.00	45.00	20.00
Paper, old corrug. box, dlr., N.Y., ton	25.00	25.00	18.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.11

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

for. If you don't sign Section 7, the carrier can come back to you for the freight charges, even if you shipped collect.

There are freight rate breaks at 500, 1,000, 2,000, and 5,000 pounds, and sometimes at 10,000, 20,000, 30,000, and 40,000 pounds for truck shipments and at higher weights for rail shipments. Whether shipping or receiving, keep in mind that if an order weighs 27,900 lb it may be cheaper to rate that shipment at the 30,000-lb rate. That means 2,100 more pounds would ride free. Purchasing or traffic managers should consider increasing such an order by about 2,100 lb if possible.

Companies should also develop a returned-material policy and provide customers with an authorization form. In that form, instruct your customers to include a copy of the packing slip with all returns so they can be immediately identified. Specify that UPS or truck should be used, depending on the size of the returned shipment. Don't allow air shipments without your permission. For shipments to be made by truck, give customers a list of your products and the corresponding descriptions to use on their bills of lading.

It is on inbound shipments that companies are most vulnerable to paying excessively for freight. Don't let every vendor ship small lots to you. You might look into the possibility of setting up one or several centrally-located consolidation points to which such shipments would be assigned. This operation will result in less congestion at your dock, less paperwork, and lower freight costs, without sacrificing service.

A seat belt manufacturer with plants in California, Texas, and Missouri purchased webbing from a vendor in Pennsylvania. From others it purchased steel stampings, steel hardware, and plastic parts. A consolidation site arrangement was set up in Chicago, since vendors were located in Illinois, Michigan, and Indiana. A contract trucker made a weekly run from the California plant, dropping off and picking up in Texas and Missouri, ending in Chicago where the accumulated freight was waiting. Of course, exceptions were made for parcel shipments and emergencies, which were shipped directly to the plants. Later, some of the vendors were replaced and a consolidation site was set up in Cincinnati—the new central location. The consolidator chosen at both locations was a local trucking company offering that service.

For more information about the Kandet Company's services **Circle 117**

Jack Flynn is president of Kandet Co., a traffic consulting firm in Waukegan, IL. He is also the author of Control Your Freight Costs.

Leased trucks may deliver tax benefits

Major industrial firms are taking another look at the lease-buy trucking decision. Reason: The recent changes in federal tax laws, namely, elimination of the investment credit, changes in depreciation, and the addition of a new alternative minimum tax (AMT) may tip the equation a bit further in favor of leasing.

That's not to say that taxes are the only factor in any final decision. Availability of cash, company service requirements, and a host of other factors also play major roles. But a new *Purchasing World* survey of lessors and lessees suggests that the ground rules have changed.

Taking off on this point, Ryder System's senior VP for corporate taxes, Harvey Smalheiser, feels the new IRS regulations have significantly reduced the tax benefits of ownership.

He goes on to say that every company must now pay a federal income tax—adding that under the AMT rules, deductions like accelerated depreciation are considered tax preference items which are added to a company's regular tax to arrive at alternative minimum taxable income. (Because trucks depreciate quickly, trucking operations are likely to fall into the minimum tax-paying position—and thus could cost more than paying the regular tax.)

The point to keep in mind is that the company must pay whichever is higher—the regular tax or the AMT. Ergo, for some outfits, leasing has become an increasingly attractive alternative.

Ryder is not alone in pointing out the pluses of leasing under the new tax law. John A. Simourian, president of the Lily Truck Leasing Corporation (a regional outfit headquartered in Boston) further explains: "The new rules place a 20% tax on half of the difference between the book income (income reported to owners) and taxable income (income reported to the IRS). This alternative minimum tax amount must be paid if it totals more than the new 34% corporate tax. This tax bite is startling when you purchase trucks and tractors using straight-line depreciation for tax purposes."

The difference between the new double-declining method of tax depreciation and the AMT 15% declining balance method creates excess tax depreciation and is subject to the minimum tax, Simourian adds.

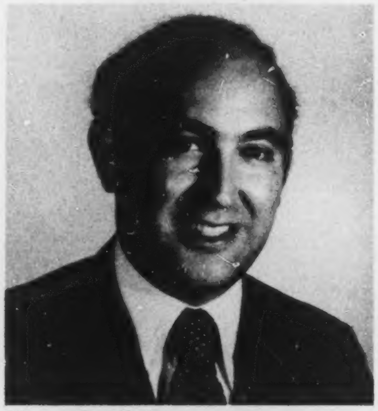
"Leasing reduces the tax by closing the gap between book income and tax income," he concludes. "In both instances, leasing helps the customer avoid the additional tax burden."

More than just tax benefits

But all this talk about taxes should not overwhelm other leasing advantages, says the American Association of Equipment Lessors (AAEL). There are cash flow benefits, the hedge against obsolescence, flexible terms, and equipment expertise which maintain leasing's advantage, observes Michael J. Fleming, AAEL president.

"If we can't get our products out to our customers on time, we've got a major problem," says Tom Leonard, president of Yankee Foods, a New England-based food distributor which leases trucks to move products to its customers. "Our delivery system is one-third of our business—sales, delivery, and goods. We have to assure our customers that they will get the product in inventory and that we'll keep out-of-stock to a minimum. It's critical to have as little downtime as possible."

Had Yankee Foods decided to purchase its trucks, arrangements for service would have been required—either to contract out or to hire mechanics and provide the garage space required. "We find leasing simpler, more efficient, and more cost-effective," observes Leonard.



Harvey Smalheiser

Gordon J. Bingham

Companies like Yankee Foods that obtain full-service leases get more than trucks and service; they also get help in cost accounting, equipment and component specifications, insurance coverage, driver safety programs, licensing, and permitting.

At many regional and national truck leasing firms, there is a 24-hour driver hotline manned by trained professionals for drivers to call whenever a problem develops on the road. If service is required, it is immediately dispatched. Moreover, such computerized systems provide regular reports on equipment history and performance, allowing a fleet operator to check on the efficiency of both the truck and the driver.

Not for everyone

Nevertheless, truck leasing is not for every company. "Ownership for us is a good idea and it continues to be so," contends Sam Thurston, VP for distribution at Giant Foods Inc., Landover, MD. Giant is the dominant food retailer in the Washington, DC-Baltimore, MD metropolitan area.

"When we look at leasing, we look in terms of its being an alternate source of financing," says Thurston. "The numbers that we generate in a cost comparison have never been significant or substantial enough to make us change our position." However, he is quick to add that the new tax changes have not yet been considered in detail. Thurston contends that the main reasons for leasing do not apply to Giant.

On the other hand, there are a lot of firms which find truck leasing advantageous. Witness the fact that 15-20% of today's commercial fleet population (about 1.2 million vehicles) is currently leased. Zero in on the big trucks, and the figures are even more impressive, says Gordon Bingham, senior VP for strategic planning vehicle leasing and services at Ryder. He estimates that 25-30% of all new medium- and heavy-duty trucks fall under a leasing contract.

And the trend is up. Fleets leased by members of the Truck Renting and Leasing Association (about 75% of the industry) grew by 7.5% last year—on top of 1985's 9.4% advance. And there is considerable optimism about the future.

David Burr, president and CEO, Rollins Leasing Corp., Wilmington, DE, says many of his company's customers have expressed interest in long-term, full-service leasing since the new tax law was passed. These are customers who currently own, rather than lease, vehicles and with whom Rollins has contract maintenance agreements.

The AAEL, viewing truck leasing from a slightly different perspective, adds that 7.5% of total leasing business added last year was in new trucks and trailers—up from 1985's 6.9% level. Moreover, leasing as a

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whole, says the AAEL, is expected to grow $8 billion, or 8% from the 1986 total of $100 billion.

Leasing is nothing new

Many firms have been leasing trucks for quite some time. Data General in Westboro, MA, began leasing its road fleet requirements in 1981 when Robert Proulx (manager, corporate transportation, fleet operations) joined the firm.

"Our analysis disclosed that full service leasing was more cost effective in the long run compared to owning and contracting an outside maintenance operation," Proulx explains. "It reduced our staff requirements. When all factors are considered, we feel that we enjoy considerable savings."

The largest part of Data General's fleet operates nationwide, while the remaining units operate primarily in New England. The firm's over-the-road long-haul trailer rigs are leased from Ryder, while the remaining units are leased from Boston-based Lily.

"We felt that Data General would be best served by using a leasing firm with company-owned shops in our cross-country operations," Proulx adds. "On the other hand, Lily is in a stronger position to help us locally. Not only is leasing on the rise, but it's becoming more sophisticated." Ryder's Bingham says that the days when a leasing company could say, "Here are my standard leases and here are my rates," are pretty much over. Successful leasing companies are working to understand the customer's total transportation operation and then customizing a lease solution that best meets those needs.

Kenneth D. Simonson, chief economist and director of tax policy at the American Trucking Association Inc., Alexandria, VA, adds that leasing can sharply reduce a company's initial cash outlay and its requirements for support personnel like mechanics and drivers. Thus, he says, it is a viable option for many companies to consider.

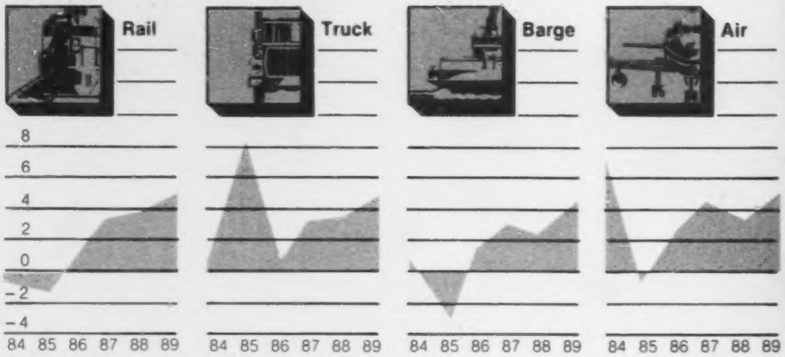
Continued on page 69...

Wharton transportation report

Fall is a good time for hikes

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

Slowly increasing demand and fuel boosts that are somewhat higher than anticipated suggest some upgrading of previous 1987 freight rate hike forecasts.

Right now, Wharton Econometrics is pointing to a 3.6% overall boost, up from the 2.4% estimate made three months ago. But the increase is still quite moderate and is in line with inflation.

Much the same is expected for 1988, when a 3.7% advance is anticipated. Contributing to the continued modest rate of increase are relatively small hikes in labor costs, another year of modest increases in energy, continuing overcapacity in some sectors, and healthy intra- and intermodal competition.

A 5% rate of increase is expected for 1989 as costs rise and better supply-demand balance is achieved. But this advance is not excessive.

Here's a more detailed rundown of trends in individual transportation modes:

- **Trucking:** It's a good demand year, with tonnage in one recent month running 10% above a year earlier. This suggests inroads into other modes.

On the cost side, diesel fuels are up about 5% from last year. But these rises will not be completely passed on. Witness the recent freight rate wars and continued industry discounting. Increases should average only about 3.5%. Next year, the pattern should be similar. But by 1989, mounting costs will bring a more robust 5.1% rise.

- **Rail:** Traffic has increased only modestly, with carloadings up less than 2% this year. Shipments of grain, coke, and nonmetallic mining products have been way up, but motor vehicles and metallic ores have been off considerably.

Piggyback traffic is still advancing faster than overall freight, but the growth differential has narrowed. Rate increases should continue to show some acceleration, with 3.9% and 4.0% increases seen for this year and 1988.

Shippers using piggyback rail and truck combinations should benefit from a recent ICC decision to eliminate government rate controls over the truck portion of most intermodal shipments. This should help expand traffic and hold rate boosts.

- **Air cargo:** Traffic has been running a healthy 6-7% ahead of last year. Rate increases are likely to be quite steep this year—advancing 4.6%.

Much of this can be attributed to both the big jump in traffic and a slowing down in the cut-throat passenger fare wars that almost always tend to spill over into the air cargo sector. Next year this spurt in rates will slow down to 3.6%.

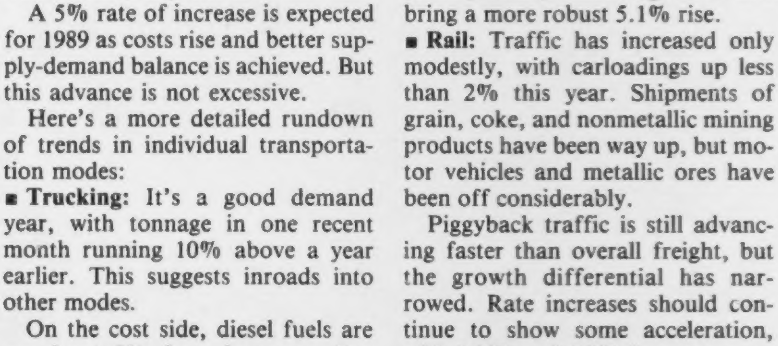
- **Water freight:** The industry appears to have levelled off after five years of decline that claimed a large number of operators as victims. The survivors are much stronger than any of the competitors were before the decline.

However, the industry's rates will continue to be held down by the huge, albeit shrinking, surplus of barges that could still take years to work off through scrappage. Thus water freight rates—though advancing faster than last year's 1.6% pace—will continue to show the smallest gains of all modes.

This year, rates are expected to increase 3.1%, with similar advances next year. And even in 1989, when general economic pressure will be heating up, barge rates are forecast to increase only 4.3%. **PW**

PurchasingWorld freight rate index

(1982 = 100)



	Increase over previous year
1980	14.9%
1981	11.0%
1982	2.0%
1983	3.0%
1984	0.5%
1985	4.8%
1986	1.4%
1987	3.6% •
1988	3.7% •
1989	5.0% •

• Estimated

Survey of the month

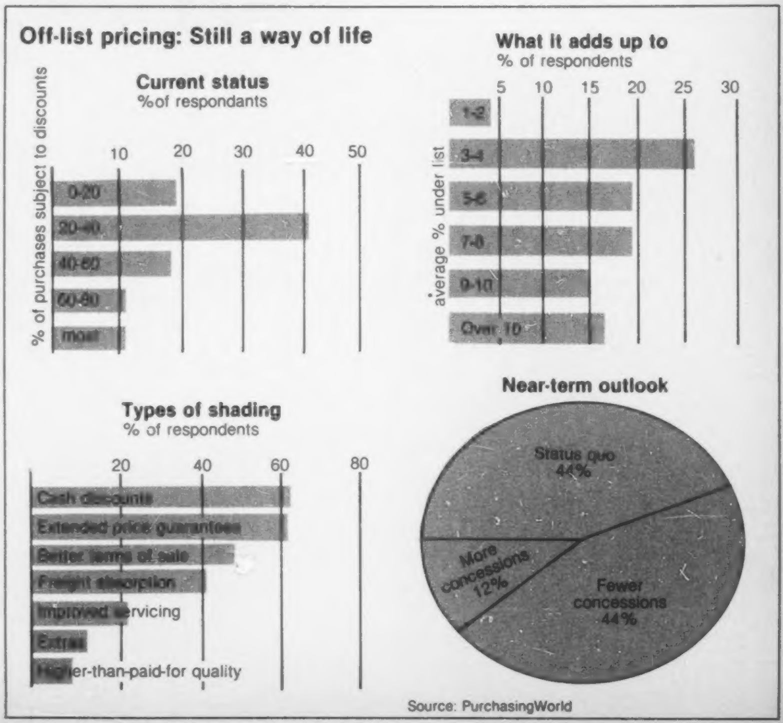
Bargain prices still abound

Although industrial tags are edging up, there are still plenty of off-list bargains around. If there are any doubts, ***Purchasing World's*** latest nationwide price survey should quickly lay them to rest. Not only are many quotes still negotiable, but the savings involved can be impressive.

Summing up the situation, Thomas Snyder, purchasing manager of Mansfield Plumbing Products in Perrysville, OH, says, "The truth is that many list prices do not reflect the true market value on either the wholesale or retail level. List prices today have very little credibility. Our procedure for major purchases has always been by competitive bidding—even when list prices were stable, had clout, and were supposedly unchangeable."

What this purchasing executive says is backed by survey results.

- **Prevalence of concessions:** More than four out of five PMs say that at least 20% of their purchases are at



Off-list pricing: Still a way of life

Source: PurchasingWorld

IN THEORY.

less than official list levels. And more than one out of five estimate that at least 60% of their buys are being shaded (see chart).

- **Recent trends:** As might be expected, concessions are a bit harder to come by vs. last year, according to 37% of the respondents. But this is hardly an across-the-board development. Almost all the remaining respondents state that there has been very little change from 1986.
- **Areas of price weakness:** Virtually every major sector seems to be involved—including steel, aluminum, copper and brass mill products, plastic resins, assorted chemicals, paper and products, motors, pipes/valves/fittings, computers, instruments, hardware, and transportation services.
- **Reasons for concessions:** 59% of queried PMs attribute continuing deals to their own hard-nosed bargaining approach. Also prominently mentioned by about 45% of respondents are foreign competition, supplier gluts, and lackluster demand growth.
- **Type of concesssion:** Two popular approaches are cash discounts and extended price guarantees, both noted by more than 60% of the survey respondents. Almost as prevalent were better terms of sale (48%) and freight absorption (41%). Also mentioned were improved servicing (22%), "extras" (11%), and higher-than-paid-for quality (7%).
- **The overall impact:** Thanks to the above concessions, the average purchasing manager says he is paying 6% under list for his purchasing mix. More than three out of ten, for example, manage to shave at least 9% off book prices.
- **A look ahead to 1988:** Most PMs feel that the recent trend toward reduced concessions will continue. Thus these survey projections: fewer concessions (44%), status quo (44%), and more concessions (12%).

Products singled out for fewer deals include paper and products, plastic resins, steel products, chemicals, and nonferrous metals. Some see more concessions in such hotly competitive areas as computers and other types of office machinery.

Whatever the product area, buyers seem determined to continue pressing for deals. Some feel order consolidation—with fewer suppliers—is the best route to this goal. Others plan either to continue playing one vendor against another or to explore the possibility of imports.

For the most part, the majority of PMs are still optimistic on the concession score—noting that while they won't have everything their way, they should have enough bargaining clout to assure continued off-list pricing.

Given today's ample capacity and slow demand growth, there's little to suggest anything but a continuation of the buyers' market of the past few years. Some of the items in current snug supply—steel, nonferrous metals, and some electronic components—could actually become easier in 1988. **PW**

IN PRACTICE.

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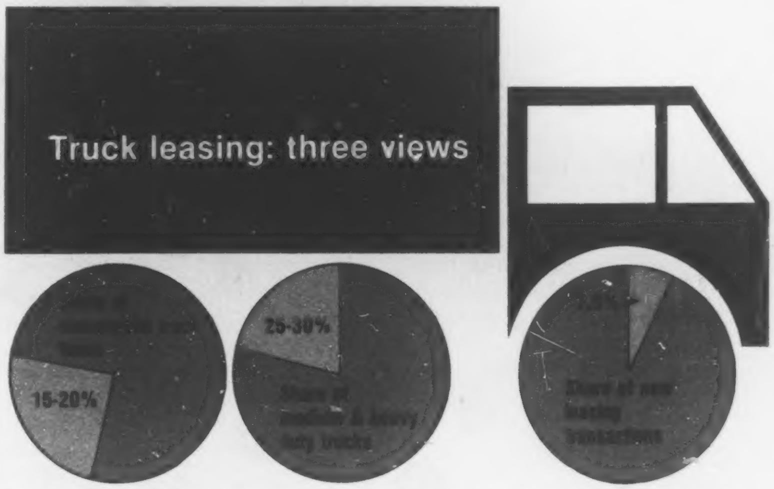
TRANSPORTATION REPORT



Source: American Association of Equipment Lessors, 1986 Membership survey, Ryder System, industry estimates

...continued from page 54

Getting down to the nitty-gritty

The decision gets down to the fundamentals of how trucks are used, how much control is required over those trucks, and what service standards are needed, he contends.

Simonson observes, "If you own, you get the depreciation yourself. You get the residual value after the truck is paid for. But either way, you should be able to spec that truck according to what you want.

"Any shipper who has very detailed needs or a large volume is going to look at owning a fleet. That's the ultimate in control. It's also the ultimate in headaches," Simonson says.

So far nothing has been said about for-hire carriers—still another trucking option. Clearly, such carriers can deliver a load less expensively than privately operated fleets that are running half-empty with no backhaul.

But with those lower prices, Simonson notes, comes a loss of control over the shipment and slower delivery schedules: "If you're shipping in less-than-truckload amounts, your cargo will be taken to a consolidation terminal, to a breakbulk terminal, to a local terminal for delivery. It takes longer. So there is a price vs. service trade-off."

Finally, there's still another approach to trucking—the so-called trip-lease—leasing a driver and truck for specific trips. Independent operators as well as leasing companies often provide this service.

To sum up, then, there are many alternate approaches to trucking. But for an increasing number of shippers, (though certainly not all), the lease approach is gaining popularity because of tax and other considerations.

Some companies, for example, lease because they simply do not want the headaches of operating what amounts to a trucking business in addition to their primary business. Says Bob Schwartz, VP for sales and merchandising, King Super Markets, West Caldwell, NJ, "We're in the grocery business, not the transportation or maintenance business. We leave that to the experts." **PW**

PURCHASING MANAGERS:
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October 1987 Vol. 31 No. 10

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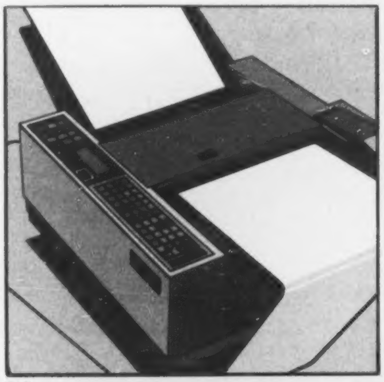

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PW PREDICTS

Roberts S. Reichard, executive editor

Price pessimism on the wane

Most signs now suggest that industrial price inflation will remain within modest bounds. Some of the more recent evidence to support this thesis:

- **Buyer surveys:** The latest N.A.P.M. Business Survey Committee report finds that most respondents do not expect prices to increase significantly over the remainder of the year. And a ***PurchasingWorld*** survey, which zeros in on office equipment suggests that this sector will show only a 2% or slightly higher advance over the next 12 months.

- **Econometric forecasts:** A new Data Resources Inc. (DRI) rundown also indicates modest increases in most sectors—for 1987, 1988 and 1989. Not one of the 24 product areas monitored in this study is expected to sport more than a 6% annual boost.
- **Oil price trends:** Fear of a continuing runup have faded. The Department of Energy assumes only a $19/bbl crude oil price over the next 12 months—and even this may be high. Overproduction could force tags to fall to $16/bbl by yearend or early 1988. Such a decline would almost certainly have positive price repercussions in such oil-dependent industries as petrochemicals and plastic resins.
- **Rising interest rates:** Today's somewhat higher borrowing costs could put a damper on inflationary pressures. Signs of the times: Increases in both the Federal Reserve discount and prime borrowing rates. The latter has moved up four times this year—bringing this key indicator to the highest point in a year and a half. And there are some who think another .5% advance in the prime rate may be in the making before the year is over.
- **Big manufacturing productivity gains:** Newly revised figures show factory efficiency rising at a 4.9% annual rate in the 2Q. This jump shows that any rise in output can now be quickly translated into higher productivity. These gains are also being aided by a modest revival in capital spending for new machinery.

Also holding costs (and thus prices) in check has been the surprisingly modest rise in pay raises. In real terms, the average U.S. worker is now earning no more than he did a year ago. One thing is sure, job insecurity (engendered by the fear that a firm will close a plant and move the operation elsewhere) has undoubtedly helped moderate worker demands.

Other current restraints on wage boosts include less reliance on cost-of-living clauses (only 38% of workers covered by major union agreements currently have such clauses) and the rising use of cash bonuses in lieu of fixed wage increases. Remember that these bonuses can disappear in hard times and they are not counted in a worker's fixed pay—thereby slowing down increases in base wages and hence fringe benefits.

All the above suggest that earlier projections for accelerating industrial price rises may have been overly pessimistic. Right now ***PurchasingWorld*** equations are pointing to a 3.5-4% increase in this key inflation yardstick over the next year.

Nor is this basically non-inflationary outlook limited to only the U.S. A new Organization for Economic Cooperation and Development study projects only a 3.75% West European inflation rate this year. And an even smaller 3.5% increase is seen for 1988.

In short, there's little on the horizon to suggest a major rise in the domestic or global inflation pace. And that goes for 1988 as well.

Selected price changes through 1987

(Comparison of fourth quarter pricing)

	% change		
PRODUCT LINE	**1987**	**1988**	**1989**
Raw materials. energy			
Middle distillates	34.4	2.6	6.4
Industrial chemicals	12.4	−0.5	1.1
Supplies for manufacturing	2.4	3.7	4.1
Intermediate materials (ex. food)	4.7	2.8	3.7
Metals			
Steel mill products	1.9	4.3	4.2
Carbon steel plates	6.0	2.5	3.4
Primary aluminum	4.3	2.1	2.7
Secondary nonferrous metals	10.7	−1.9	1.6
Pig lead	28.4	−6.8	0.9
Copper & brass mill shapes	6.6	0.8	2.5
Components			
Rubber & plastic products	2.1	2.8	2.2
Laminated plastic sheets	0.4	2.1	3.5
Corrugated boxes	8.9	1.5	2.7
Foundry & forge shop products	2.3	4.4	4.1
Fabricated structural metal products	1.8	2.6	3.8
Electronic components	0.7	4.5	6.0
Construction			
Paint materials	9.7	6.2	4.3
Concrete rebars	−0.8	5.1	4.9
Hardware	2.3	3.6	2.9
Wiring devices	2.2	4.5	5.8
Insulation materials	1.7	3.4	4.7
Machinery			
General purpose machinery	1.6	3.6	4.0
Oil & gas field machinery	0.8	4.6	3.9
Trucks (over 10,000 lb.)	1.6	4.7	5.6

Source: Data Resources, Inc., 1987 Forecasting Services

PW PREDICTS

Machine tools

CURRENT SITUATION: Buyers are still calling the shots—as demand lags and overseas competition persists. Not even the voluntary restraint agreements (VRAs) signed last year have had much effect—mostly because of the substantial overseas inventory pileup. Government import price indexes do suggest some firming, but more often, they are unable to pick up all the current price shading.

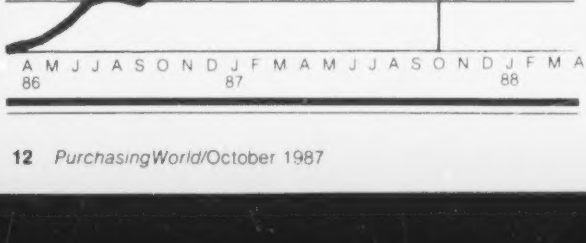
DEMAND: New orders probably won't hit last year's $2.1 billion level. Credit continuing foreign competition (overseas producers had 49% of the 1986 market) and shrinking markets in such key areas as autos, aerospace, construction, and farm equipment. Other demand inhibitors: 1) manufacturers are generally requiring less metal cutting 2) new computerized machines frequently replace a half dozen older ones. **Two bright spots: A recent increase in the customer inquiries and the somewhat better export demand in the past few months.**

SUPPLY: Excess capacity continues. One recent estimate puts current tool demand at well under 50% of production potential. **Several Japanese outfits are opening assembly plants in the U.S.**—because of import restraints and the higher Japanese yen. Many European firms have bought U.S. machine tool builders, which now assemble the parent firm's tools as well as their own. **Finally, VRAs may not work.** Only Japan, South Korea, and Taiwan have signed such pacts and even if they do work, domestic operating rates probably won't exceed 60% for a while.

PRICE OUTLOOK: Near-term increases will be quite modest. Supply-demand imbalances should persist. And foreign sellers are still paring built-up inventories. **Best bet: A slow price increase of 2-3% in the next six months.** For 1988 and 1989, tags should rise in line with general inflation at 2-3% annually.

Metal cutting machine tool prices

(Index 1967 = 100)



Aliphatic organic chemicals

Be prepared for scattered increases as these chemicals move up the price ladder: propylene glycol, where a 3¢/lb boost has pushed distributor tags up into the 36-40¢/lb range; acetone which has moved up 1¢/lb (to 24¢/lb); ethylene oxide which is up 3-4¢/lb; 1,1,1 trichloroethane also up 3¢/lb; and methanol which advanced 2¢/lb in September with a similar advance to 38¢/lb scheduled for the current month.

Freight

Higher motor carrier rates are shaping up for this quarter as several trucking conferences announce new boosts running in the 3-4.5% range. Although discounting is likely to continue, it should be off these new higher listings. Behind the move: a profitless industry because of rate wars. In recent quarters, for example, many firms report operating ratios (expenses as a share of revenues) above 100%. And one rate bureau shows that for a whole year, half of its members spent more than they were able to take in.

Computers

Competitive pressures persist. The latest move involves the introduction of a cheaper, more powerful MicroVAX minicomputer by DEC—which could force price adjustments by IBM and other minicomputer makers. The firm also recently slashed 30% off the price of an entry level terminal in a move to halt inroads by DEC-compatibles. Meanwhile, substantial discounting is now being reported on IBM's new Personal System/2 lines—with anywhere from 19-32% being shaved off the PS/2-60, PS/2-50, and the PS/2-30 models.

Polystyrene

Prices have slipped about 1¢/lb (to near 52¢/lb for the general purpose/crystal grade)—but only because of recent declines in styrene feedstock costs. The impact grade has also softened a bit—fetching only 55¢/lb at last report (vs. 55-58¢/lb this summer). Demand in the meantime remains quite brisk. Sales are expected to be up 5-10% this year. Supplies also suggest a strong market. The industry should operate at 88% of its rated capacity this year—compared to only 80% in 1986. Even higher levels are projected for 1988 as only about 2-3% is added onto overall industry potential.

Polystyrene prices

(General purpose grade market price ¢/lb)

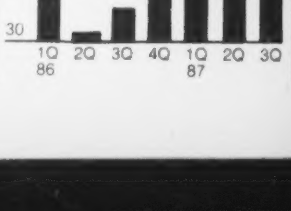


Image processing

You'll be hearing a lot about commercial image processing systems in the years ahead. Real gains, says a new Frost & Sullivan study, will be in the double-digit range through the early 1990s. Artificial vision (growing 19.3% a year) will spearhead the advance—thanks to increased use in 1) security and surveillance fields, 2) industrial inspection, and 3) automated factories for robotic vision and object sorting. Another big growth area: graphic arts—including optical scanning.

Steel

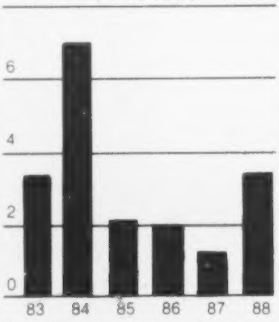
Prices continue to edge up—with a previously announced $25/ton increase on flat-rolled products holding up quite well. This is occurring despite the sluggish pattern of steel shipments noted so far this year. Reason: Less-than-anticipated 1987 USX production and outages related to high operating rates (hot strip mills are currently operating at over 80% of capacity). Other factors contributing to a strong market: this year's 15 million-ton drop in U.S. melting capacity to 112 million tons, and low user inventories.

Paper

Strength continues to be the order of the day, with 1) another attempt to boost linerboard by $30/ton (into the $380/ton range) and 2) a new 6.1% increase in pulp—one that brings prices here up to $610/metric ton. Also indicative of a bullish market: recent increases in newsprint and coated groundwood—with the latter up $60/ton this past summer (into the $720/ton range). Demand, too, looks strong—as total consumption of paper and paperboard heads for an 80-million-ton year.

Electronic component prices

(% increase)



Source: TRW Information Services Divison

Electronic components

This year's market recovery in semiconductors (demand up an estimated 17%) is no fluke. If a new Henderson Ventures projection is anywhere near correct, an even bigger 20% U.S. advance is likely for 1988. Credit continuing growth to a rejuvenation of the commercial electronics sector. Communication, computer and office, and industrial and instrument electronics will all benefit from higher capital spending sparked by an improved trade balance and higher factory utilization rates. Also expect prices to accelerate a bit—with overall electronic component tags moving up 3-4% next year.

Textiles

CURRENT SITUATION: The industry should have a fair year. Demand is high and new orders are brisk, and imports are leveling off after last year's 17% jump (sq. yd. equivalent basis). Prices are beginning to edge higher—with an added push coming from recent increases in fiber costs. Cotton and wool quotes are now running well above late 1986 levels—and price increases in polyester, rayon, and nylon have recently hit the manmade sector. **Price tags on polyester/grey goods, knitted fabrics, wool fabrics, and bed and bath products have been strong.**

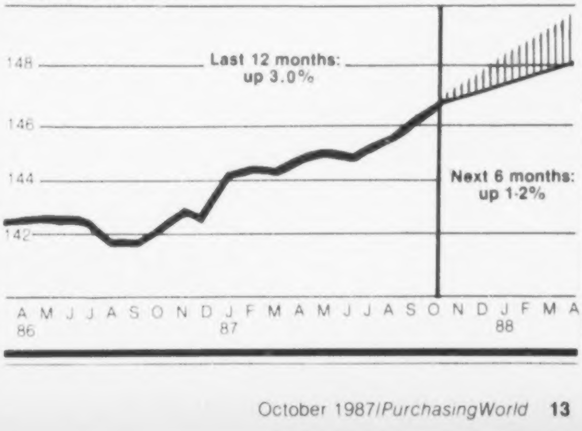
DEMAND: Mill production could be up as much as 7-8% over 1986. "Quick Response" and "Buy American" programs have also helped the domestic industry. Carpeting, hurt by housing slowdowns, will be lucky to see a 1-2% advance for 1987. And in 1988, overall gains could decelerate a bit as consumer income gains slow and somewhat higher apparel tags discourage consumer purchases. **Best bet: a 3-4% advance in overall mill production.**

SUPPLY: Today's snug markets should continue as demand holds firm, the government steps up import monitoring, and domestic operating rates hold at high levels. **Latest figures indicate that the U.S. industry is now operating at or above 95% of potential.** And rates are likely to stay near that level—current surveys suggest 1-2% capacity increases for 1987 and 1988.

PRICE OUTLOOK: The upward tilt of recent months should continue as fiber costs edge lower, markets remain tight, and import competition is somewhat muted by quota restrictions and the weak dollar. But increases should be relatively modest because of buyer resistance and mill cost-cutting (mill productivity has been rising about 5% a year—nearly double the all-manufacturing rate). **Price increases should average about 1% or less per quarter into 1988.**

Textile mill product prices

(Index December 19 5 = 100)



PW PREDICTS

Energy

Earlier fears of a major energy price runup are beginning to fade. Prices will be above last year's levels, but barring a Mideast blowup, advances should be much more modest than in the past few months.

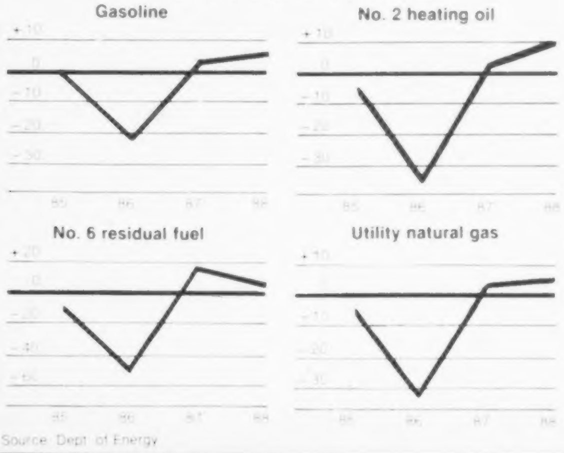
One key reason is that oil is once again becoming a glut on the market as OPEC producers exceed their agreed-upon quotas. Assuming continued cheating by cartel members (resulting in about a $19/barrel world crude price), here's what Department of Energy analysts are projecting for the rest of 1987 and for 1988:

- **Gasoline:** Pump prices should dip below $1/gallon by the end of 1987 as demand begins to drop off seasonally. Any subsequent increase will be quite modest—mid-1988 tags should average $1.03-1.04/gallon.
- **Heating oil:** By early 1988, wholesale prices should advance to near 55¢/gallon—up about 10% from recent levels. 1988 tags should average around 55¢/gallon—although somewhat lower prices are possible during the slack summer months.
- **Heavy fuel oil:** Competition from natural gas will limit near-term increases to utilities. The expected first quarter 1988 high of $2.92/million BTU is up only 7.5% from recent levels. Next year—up by just 3.5%.
- **Natural gas:** Only very small increases are anticipated as excess supplies persist. Right now, 1988 utility prices are projected to rise at only about 4.5%. Residential gas should be up just 1.5%.
- **Electricity:** Average residential rates will advance in line with general inflation. Best bet: An increase to about 8.01¢/kwh for all of 1988.

These modest price increases are likely to spur demand. Right now, energy industry spokespeople see up to a 2.5% increase in overall use next year—about three times this year's estimated 0.8% advance.

Energy prices: Four views

(Percent of change from previous year)



Source: Dept. of Energy

Chlor-alkalis

Firming prices and tighter supplies are now the story. Caustic soda, for example, now commands about $100/ton (Gulf, railcars)—up $5-15/ton from levels prevailing as recently as July. Chlorine over the same period has moved up about $5/ton—bringing tags here up into the $160-165/ton range (Gulf, tank cars). Soda ash, too, has been edging higher—with an early summer $6/ton increase reported as being at least partially successful. But tags here still remain well below the official $83/ton list— in the $73-77/ton range.

Computer networking

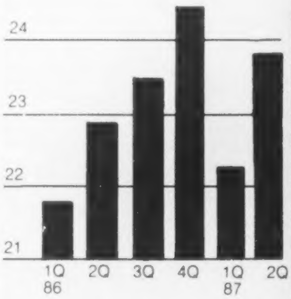
This may well be your top computer priority in the years ahead. This year, $800-900 million will be earmarked for LANs (involving the linkups of computers within about a mile of each other) and wide area networks that can span continents. And if forecasts calling for 40-50% annual growth made by International Data Corp. are correct, networking purchases could exceed $3 billion by 1990. Only 10-12% of U.S. computers used for business are now tied together. But within a few years that percentage will triple.

Polyethylene

Both the low-and high-density segments of the industry are sporting higher prices. Hikes ranging from 4-5¢/lb have recently been announced for both LDPE and HDPE. And while not all of this is likely to hold, quotes should be considerably above the 34-35¢/lb (liner grade LDPE) and 33-35¢/lb (injection and blow molding HDPE) that have prevailed over the past few months. Behind the strength: Strong demand (expected to be up 5% and 7% this year for LDPE and HDPE, respectively) and high operating rates (90% for LDPE and close to full capacity for HDPE).

Accounts receivable

(% past due)



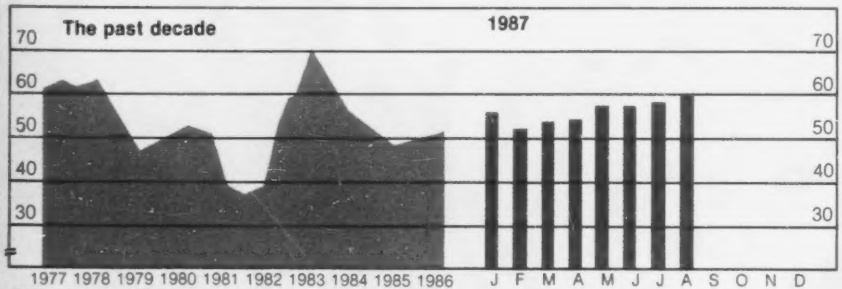
Accounts receivable

On-time payments are slowing down a bit. As of the latest available period (2Q 1987), 23.8% of accounts receivable were overdue—up about one and a half percentage points from three months earlier. All of the increase came in the 1-60 day past-due sector—with the 60 days and over category holding steady at 5.6%. The figures, collected by TRW's Information Service Div., also indicate some significant seasonal variation. Slowest payments usually occur 1Q.

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Indicators point to good finish for 1987

The year should be ending on a fairly strong note, even though some of the basic problems—the budget and trade deficits, and a weak dollar—remain. And somewhat higher interest rates could hurt over the long pull.

But for the near term, things are actually looking up. Industrial production, aided by increasing exports and continuing trim inventories, has to be regarded as a plus. So does the price and wage restraint that turned out to be greater than expected only a few months ago.

All this can probably best be summed up by looking at the N.A.P.M. Business Barometer—a yardstick that has consistently been able to call the turns in GNP and other key indicators of the general business trend. The latest reading is 59.9—nearly 10 points above the neutral 50 mark, and the highest level in 3.5 years.

A look at inventories best illustrates the newfound optimism. Traditionally, inventories would have shown a sharp rising trend at this mature stage of a business recovery. Not so this time around.

Specifically, the factory stock/sales ratio at latest report was down near 1.62 (see chart). That's close to its all-time low and far under the 1.75 high hit back in early 1986.

This can't be underestimated. Low stock/sales ratios mean new factory orders, as they come in, will quickly be translated into new production. And that's apparently what's been happening—with industrial output now rising at an annual rate of 4%.

Construction trends aren't bad, either. Higher interest rates are hurting housing starts, but note from the chart that overall awards remain quite high.

Equally significant, total awards so far this year are actually running 1% ahead of 1986 levels. Much of the upward thrust is coming from non-building construction which is up 7%.

The employment picture also suggests continued economic buoyancy. The help-wanted index (see chart) is now at its highest point in years.

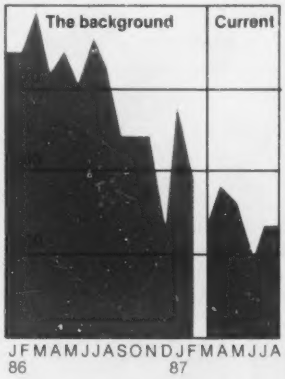
A spokesman for the Conference Board, which compiles this series, adds that "The latest readings suggest that the improving trend in labor market activity is likely to continue into the fall. The gains of recent months reflect a very sharp rise in the South Atlantic and East South Central states, while elsewhere the increase has been more moderate."

This basically optimistic labor picture is further supported by government figures which show continued increases in business payrolls and an unemployment rate that re-

Leading indicators

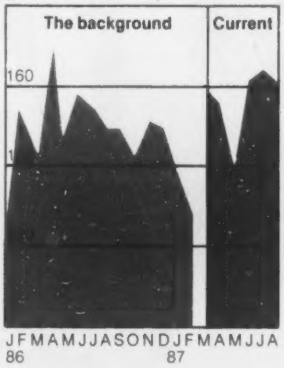
1. Factory stock/sales ratio

(Ratio)



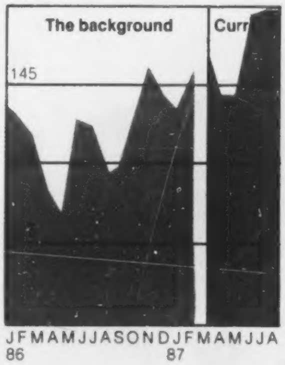
2. Construction awards

(Index: 1982 = 100)



3. Help wanted

(Index: 1967 = 100)



mains stable in the relatively low 6% range.

Consumer spending on some big-ticket items like autos continues to disappoint—despite all the big new financial incentives now being offered. But this, in itself, won't be enough to prevent further GNP gains.

Upshot: Look for another modest increase in GNP for 4Q 1987—probably about 2-3% at annual rate.

Fleet cars will be driven longer, harder

Another shift in fleet car strategy—toward keeping cars longer and driving them more—may be in order, say 260 commercial fleet car managers in a recent survey by the National Association of Fleet Administrators (NAFA).

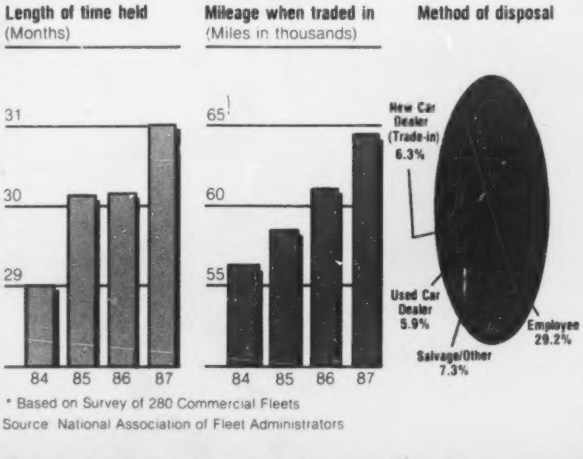
Some of the new study's key findings:

- **Mileage driven:** The average commercial fleet car is now driven 64,356 miles—up 5.5% from the previous year.
- **Vehicle age:** The average age of a trade-in is now near 31 months—up nearly a month from last year's 30.2-month reading and up 2 months from 1984.
- **Disposal method:** Auto auctions/wholesalers are the most popular approach for commercial fleets—accounting for more than half the vehicles sold. Another 30% are earmarked for employees. The rest of the cars are about equally divided between new car dealers, used car dealers, and salvage.
- **Selling price:** When sold to an employee, the going quote is usually determined by using the Automotive Marketing Report. Other common price-determining methods: book value, leasing company price, NADA wholesale prices, and Black Book value.

The survey also looks at non-commercial fleet practices and finds that these vehicles are held even longer. The pertinent figures are: public utilities (81,362 miles and 61 months) and governmental fleets (87,231 miles and 55 months).

Also worth noting: Almost all of the responding fleets (97% of commercial, 92% of government, and 96% of public utilities) sell cars "as is." Likewise, 88%, 71%, and 88% of these fleets, respectively, do not recondition their cars before disposal.

Fleet car management trends*



* Based on Survey of 280 Commercial Fleets

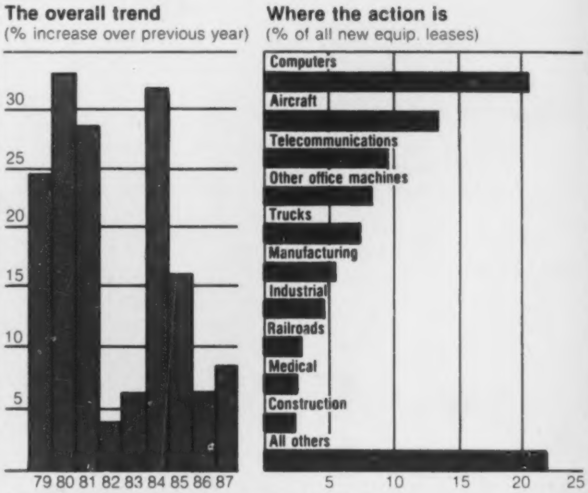
Source National Association of Fleet Administrators

Lease is more

Equipment leasing is heading for another record year. New survey results just released by the American Association of Equipment Lessors (AAEL) suggest close to $100 billion in new business for 1987—a significant 8% advance above levels prevailing in 1986.

More important, it marks another in an uninterrupted series of gains (see chart). Another figure worth pondering is the AAEL estimate that anywhere from 25-30% of all equipment acquired in the U.S. today is leased.

Equipment leasing: still growing



Source American Association of Equipment Lessors

More specific figures, which cover 1986, pinpoint where most of the action is. Last year some $15-20 billion in new leasing business went for computers. And preliminary indications point to a substantial gain in this sector in 1987.

Other significant figures on new leasing business over the past year: Autos ($10-13 billion), aircraft ($10-12 billion), trucks ($6-7 billion), telecommunications equipment ($5-6 billion), office equipment other than computers ($4-5 billion), manufacturing machinery ($2.5-3 billion), and industrial equipment ($2-3 billion).

The new AAEL study also finds lessors putting more and more emphasis on non-tax products and doing less big-ticket tax-oriented leasing.

Commenting on this trend, AAEL Chairman William Montgomery, president of Xerox Credit Corp., observes, "We are seeing increasing interest in the non-tax benefits of leasing such as cash flow advantages, its hedge against obsolescence, flexible terms, and equipment expertise."

Another trend revealed in the survey is the move toward short-term operating leases. More and more companies are now using leases of average terms of 60 months.

On the other hand, the industry expects there will be slower growth in leveraged and direct financial leases because they are more sensitive to tax law changes than operating leases.

CURRENT PRICES

Prices creep but not too steep

The basic inflation pattern of spring and early summer continued last month—with industrial producer price averages still moving up about 3-4% annually.

Once again, energy sparked the advance as gasoline, home heating oil, residual fuel, jet fuel, and liquid petroleum gas all rose and offset slight declines in natural gas and coal. But the upward trend may be ending as OPEC overproduction puts downward pressure on crude oil quotes and eventually refined petroleum products.

Also reassuring was the drop-off in industrial chemicals which fell about 2% over the past month. Plastic resins also dropped. But newly posted increases in the resin area suggest a return to the plus column when the next overall price report is released.

Somewhat less satisfying was last month's 0.6% advance (more than 7% at annual rate) in the construction materials sector. Moving up over the month were nonferrous wire and cable, fabricated structural metal products, softwood lumber, plywood, plastic construction products, asphalt roofing, and building paper and board. Only gypsum among the major materials reported a decline.

Paper price trends don't appear to be that rosy, either. Quotes advanced on a broad front—higher asking prices are in effect for paper, paperboard, and many types of shipping containers.

A similar trend is noted in the metals area as new boosts hit steel, copper, and aluminum. Fabricated metal products followed suit. But lead seems to have topped out and zinc is beginning to weaken after a long runup.

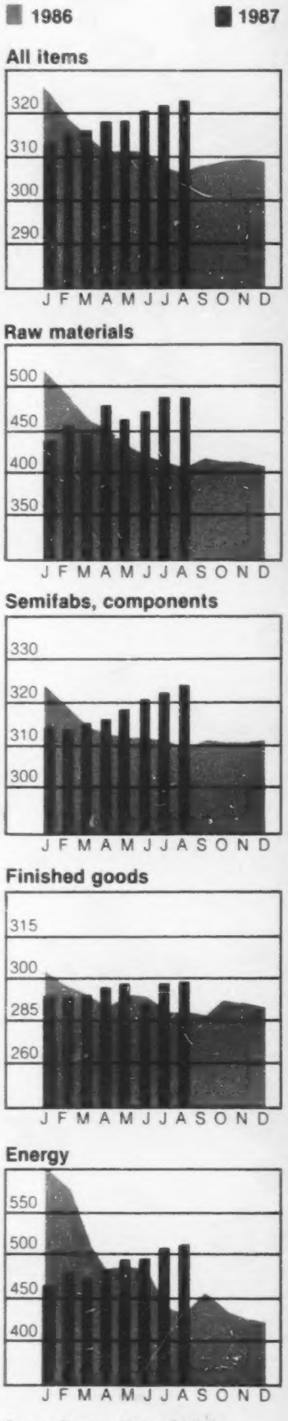
Some upward tendency is also noted in capital equipment—prices are advancing 0.2% (2.4% at annual rate) over the past

This month's breakdown

	Latest level (August)	% change from: Month ago	Year ago
Bearings	357.0	0.1	−0.1
Bolts, nuts, etc.	278.9	0.1	0.6
Chemicals, inorganic	292.6	−0.7	−0.7
Chemicals, organic	353.4	−2.1	9.8
Concrete products	326.3	0.1	0.4
Corrugated cartons	NA	NA	NA
Cutting tools, small	293.2	0.0	0.4
Electric lamps (bulbs)	353.3	1.7	1.5
Electronic components	203.7	−1.0	0.5
Fans and blowers	371.7	0.3	1.6
Foundry and forge products	365.3	0.4	0.9
Fuel oil (residual)	721.6	4.8	99.9
Furniture, commercial	327.3	0.2	2.9
Gasoline	429.5	3.5	38.2
Glass, flat	238.3	0.3	2.5
Glass containers	402.3	0.0	0.0
Gypsum products	308.6	−2.6	−10.2
Hand tools	396.7	0.3	3.3
Hand tools, power driven	241.8	0.5	1.3
Industrial furnaces	402.2	0.0	1.8
Integrating and measuring instruments	241.1	0.1	1.8
Internal combustion engines	359.5	0.1	1.5
Lubricating oil	345.0	−5.6	−0.2
Lumber millwork	332.0	0.2	3.2
Material handling equipment	299.1	−0.1	0.7
Metal containers	358.4	0.2	−1.2
Metal mill shapes (nonferrous)	324.9	1.2	8.0
Metal tanks	302.7	−0.3	1.2
Motors and generators	357.3	0.1	1.2
Motor trucks	323.0	1.1	5.5
Office and store equipment	159.0	0.1	2.9
Paperboard	300.7	1.5	9.4
Paper boxes and shipping containers	287.8	0.1	6.6
Paper office supplies	240.9	−0.6	1.5
Paint	284.6	0.3	0.7
Plastic resins	321.5	−0.8	9.2
Precision measuring tools	278.4	−0.3	3.9
Pumps and compressors	365.2	−0.5	0.8
Refractories	375.3	0.2	0.8
Rubber belts and belting	327.5	−0.1	−3.4
Scales and balances	234.4	0.0	1.3
Steel products	354.3	0.3	1.7
Switchgear	290.7	−0.2	1.8
Textiles, synthetic fibers	148.5	0.3	−0.7
Textiles, gray fabrics	157.3	−0.4	4.7
Tires and tubes	232.4	0.1	−0.3
Transformers and power regulators	240.2	1.9	2.5
Welding equipment	304.5	−0.4	0.7
Wire and cable	217.6	3.4	5.9

Industrial prices

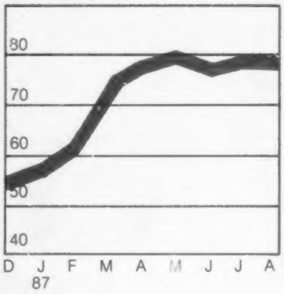
(Index: 1967 = 100)



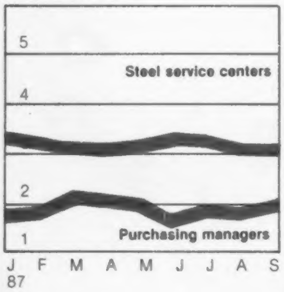
Source: Bureau of Labor Statistics

Steel

Operating rates

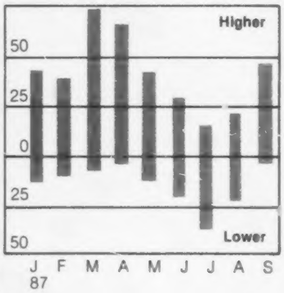


Inventories
(Months supply on hand)

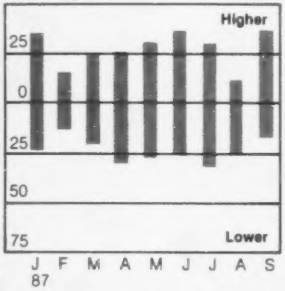


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 18%
SAME 57%
SLIGHTLY BELOW 25%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 2%
SAME 85%
5-10% BELOW 13%
10-20% BELOW 0%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

30 days. Sparking the increase were light motor trucks, transformers, engineering and scientific equipment, and storage batteries. But there were some offsets—namely declines in packaging machinery, material handling equipment, pumps and compressors, and welding equipment.

Also reassuring in the capital investment sector is a new Commerce Department report projecting 1987 plant & equipment totals. Comparing figures on a current dollar basis (up 2.5%) and volume basis (up 1.4%) indicates that current plant and equipment prices will advance only about 1% for the year as a whole.

STEEL SCENE

Turnaround in steel buying

Rather than falling off as projected earlier, steel demand could show some fair-sized gains over the remaining months of the year.

Both buyers and service centers are pretty much agreed on this point. Some 36% of purchasing managers responding to the latest N.A.P.M. buyer survey expect to increase their intake of steel through yearend vs. the 18% who feel some cutbacks may be in order.

More significant, this marks a complete turnaround from the previous month when 11% anticipated increases and 25% expected decreases. In fact, there hasn't been such a preponderance of opinion in favor of an increase in steel receipts in more than a year and a half.

The latest Steel Service Center Institute (SSCI) survey suggests an even more dramatic pickup. At latest report, 46% of queried distributors were betting on gains over the next three months—far outweighing a minuscule 5% who felt that declines might lie ahead.

If true, this would assure a solid "plus" year for service centers. Reason: Year-to-date shipment figures for these middlemen are already running more than 5% ahead of year-ago levels.

But part of this could represent a shift in source of purchases—from mills to service centers—rather than any increase in overall consumption. Taking off on this, SSCI President Andrew Sharkey observes, "Extended leadtimes and reduced availability, particularly of plate and some sheet products, have resulted in some mill buyers increasing their use of steel service centers."

This concern about tightness may well be warranted. One top Midwestern mill executive told *PurchasingWorld*, "You can't even talk about leads; if you don't have a position with the mill, it's impossible to place an order."

Sharkey says that demand is not the problem. He attributes the snugness to production shortfalls at the mills and a drop in foreign imports. The latter, he says, are down for two reasons: the fact that some overseas suppliers have filled their 1987 allocations and now have to wait until 1988 to resume big-scale shipments, and the weak dollar, which has forced import prices up.

On the latter score, only 13% of queried service centers now say foreign carbon steel is cheaper—compared to 36% a year ago. And the dropoff in stainless bargains is even more impressive—17% now report cheaper incoming shipments, nowhere near the 93% reading of a year earlier.

A similar picture is painted by steel-buying PMs where only 25% note price breaks—with all dubbing the advantage as "slight." A year ago, 43% said they were paying less overseas.

Buyers also say foreign mills are now a lot less active than they were in seeking new U.S. business. Roughly one out of three reports less activity than three months ago—and only 4% report increased activity.

Again confirmation comes from service centers, where the comparable figures are 78% less active and only 2% more active.

Meantime, this reduced foreign competition—coupled with good demand—is expected to drive steel procurement costs up. Specifically, 92% of the distributors feel replacement costs six months hence will be up—and not one anticipates any decrease. More important, 21% feel the increase could be in excess of 5%.

Despite expectations of higher prices and supply tightness, there's little indication—either on the part of buyers or service centers—of any inventory buildup. In the case of PMs, 36% contemplate inventory decreases over the next six months, outnumbering the 7% who feel some increases may be needed.

Implication: Few expect any really long-term problems. Several buyers queried by ***Purchasing World*** see a return to better supply/demand balance—if not by yearend, then certainly by next spring or summer.

PROCUREMENT STATUS

Get ready to add a little wait

The drying up of some supply excesses—aggravated by a normal fall business pickup—is causing some modest procurement stretchouts and delays.

But there's little to suggest a major shift in the basic supply-demand situation. About half of the two-point advance in ***PurchasingWorld***'s exclusive leadtime index to 52 (50 is neutral) can be traced to seasonal factors.

The same is probably true of the 20% of N.A.P.M. Business Survey Committee members who report slower deliveries over the past month. This reading is only slightly above the 17.5% average of the previous two months.

Problem areas are scattered rather than across the board. Much of the tightness is centered in steel (three of the five products mentioned on the N.A.P.M. short supply list are in the steel category).

An easing pattern should occur in plastics and some inorganic chemicals since there seems to be adequate capacity to meet the modest near-term demand increases currently being projected.

All the above is not meant to imply that we will return to the buyers' market of the past few years. Current and projected factory operating rates suggest no decline to earlier levels. The average utilization figure will remain at close to 80% of capacity.

That's a figure most economists can live with—low enough to keep prices from rising too precipitously and high enough to assure additional capital investment to keep GNP in the plus column.

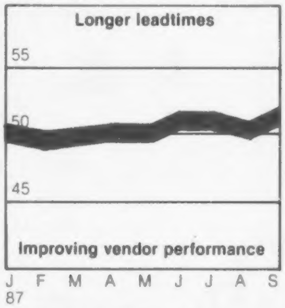
The lack of concern also shows up in buying and inventory trends. On the buying front, 54% of PMs queried say they are still ordering on a 30-day-or-under basis vs. 58% and 56% two months and one month ago, respectively.

On the inventory sector, few seem ready to lay in extra supplies. In the latest reported month, the 18% who said they were accumulating was balanced by 17% who were paring. Since this is occurring at a time when inventories tend to rise seasonally, it should be regarded as a reassuring sign.

Monthly procurement status report

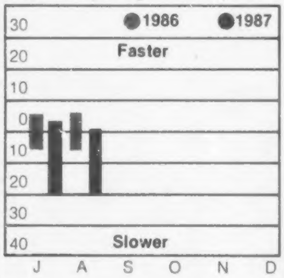
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



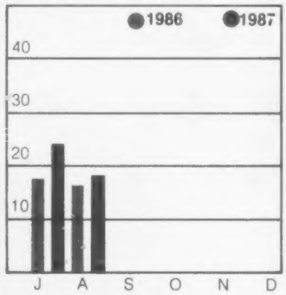
Delivery performance

(Percent reporting deliveries)



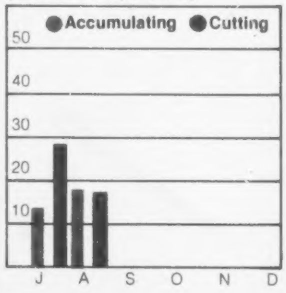
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Steel is a problem—with only those holding a position with a mill able to place an order. Hot-rolled and plate are particularly tight. And in aluminum coil and sheet, most mills are quoting 22 weeks in the absence of an allocation. Elsewhere lumber and plywood are out to as much as 6 weeks.

Cleveland: Steel alloy metals are snug. Elsewhere it's status quo with these weekly leads: glassines and greaseproof papers (4-5), hardwood lumber (2-3), softwood lumber and plywood (1-3), plastic shrink film (on demand), corrugated (2-3), 2-ply fiber drums (2), paint (2-3), and aluminum (8).

Los Angeles: The West Coast seems to have avoided recent tightening—with these typical (basically unchanged) weekly leads: galvanized steel (14), aluminum tubing and specialty wire (4-6), grey iron castings (10-12), corrugated boxes (3-5), pumps (11-12), and stainless coil (14-16).

Houston: Longer waits here, with these higher weekly leads: high-density polyethylene and polypropylene (7.5), galvanized steel coil (18), carbon steel tubing (16-18), alloy steel tubing (18-20), and plastic bottles (11). Also high pressure heat exchangers are at the upper end of their 17-20 week range.

Philadelphia: Steel leads (in weeks) are up to the following levels: carbon and alloy seamless tube (8-9), stainless flat rolled strip (16), nickel alloy tubing (10-12), and stainless round coil from mill (14). One exception: carbon bar hex shapes which have come in 6 weeks (to 8).

Pittsburgh: Lead has moved out a week (to 3). Copper fabricated mill products are out another 2 weeks (to 6). Zinc takes 5 weeks but is expected to shrink in line with recent mine settlements. Not much change elsewhere: multiwall bags (6), plastic bags, and corrugated and folding boxes (3-4), and plastic resins (5-6).

Leadtimes (in weeks)

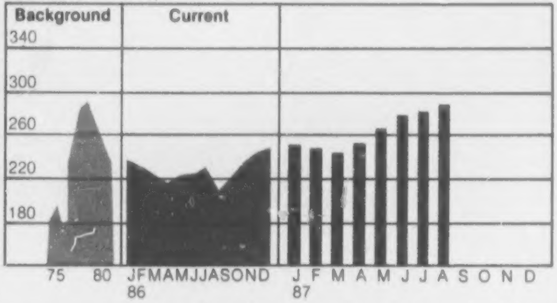
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	11	11	8
Plate (Phil)	10	10	3½
Plate (Chgo)	13½	13½	4
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	11	6½
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	12
Structurals (Chgo)	5	5	4½
Structurals (Hous)	11	11	11
Tubing (Phil)	8½	5½	5½
Grey Iron Castings (LA)	7	7	4½
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	16	16	16
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	4½
Motors (Phil)	9	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	2½
Plywood (Chgo)	5	3	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	3
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	½	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	½
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	22	19	13
Aluminum Plate (Chgo)	14	14	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	22	19	13
Brass Castings (LA)	9	9	7
Brass Rods (Chgo)	7½	7½	9
Brass Sheet (Chgo)	11	11	5
Brass Tube (Chgo)	13	13	7
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	4	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	4	4	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	50
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	7
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	22	21	21
Heat Exchangers, Hi-pressure (Hous)	25	24	24
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	21	24
Pumps (LA)	11½	11½	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	4	4
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month 288.0
Month before 284.2
Year ago 212.0

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	26.90	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.780	.765	.550
Antimony, N.Y., dealer, lb.	1.12	1.06	1.07
Beryllium-copper, cost ingot, lb.	5.65	5.65	5.65
Brass, red, 85%, [sheet], lb.	1.45	1.47	1.28
Brass, yellow, [sheet], lb.	1.40	1.42	1.23
Cadmium, N.Y., dealer, lb.	2.20	1.45	1.05
Copper, electrolytic, wire bars, refd., lb.	.81	.83	.64
Copper sheet, over 24 in., lb.	1.54	1.56	1.37
Lead, common, N.Y., lb.	.42	.42	.23
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	330.00	300.00	182.00
Molybdenum, oxide, dealer, lb.	3.02	2.75	3.15
Nickel, cathode, dealer, lb.	2.50	2.32	1.79
Platinum, dealer, oz.	600.00	630.00	621.00
Silver, N.Y., oz.	7.56	7.76	5.70
Tin, N.Y., dealer, lb.	3.17	3.04	2.57
Zinc, Prime West, East St. Louis, lb.	.43	.47	.44
Zinc, die casting alloy, No. 3, lb.	.485	.525	.475
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.98	17.01	16.34
Grocery sacks, ton	390.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	350.00	350 00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.236	.240	.222
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.22	0.94
Cotton middling, 1", N.Y., lb.	.682	.734	.330
Printcloth, 48", 80x80, N.Y., spot. yd.	0.95	0.97	0.74
Army duck, 37", 13 oz., yd.	1.495	1.495	1.450
Blended printcloth, 64", 78x54, yd.	.92	.94	.75
20s combed yarns	2.03	1.98	1.74
Wool 64s, Staple, lb.	3.00	2.70	1.90

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	105.00	105.00	80.00
Benzene, petroleum, tanks, Houston, gal.	0.93	0.95	0.80
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.81	.81	.91
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.32	.32	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.295	.295	.270
Polyethylene resin, low density liner film grade (market place), lb.	.345	.345	.250
Polypropylene, homopolymer grade (market price), lb.	.440	.440	.320
Polystyrene, general purpose grade (market price), lb.	.520	.535	.330
Polyvinyl chloride, pipe grade (market price), lb.	.360	.340	.285
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.38	.40	.33
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.77	.77	.73
Xylene tanks, gal.	.780	.820	.800
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	329.60	331.50	324.85
Lumber 2x2 pine, mbf, cl	335.95	334.10	313.00
Plywood, plyform, ¾", msf, cl	580.65	585.15	591.25
Plywood, ⅝", msf, cl	385.95	389.00	385.55
Cement, bulk, ton, tl	64.25	64.25	63.35
Sand, ton, cl	7.21	7.17	6.62
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.08	49.08	45.83
Crushed stone, 1½", ton, cl	8.30	8.28	7.78
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.90	0.90	0.83
Gypsum sheathing, ½"x1"x8", msf, tl	228.23	228.23	217.57
Brick, common, per thousand, tl	198.26	198.26	185.81
Asphalt paving, AC-20	137.59	132.97	144.97
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.50	7.51	7.21
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	15.50	17.25	11.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	18.00	21.75	14.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.565	.600	.470
Gasoline, 94 oct., reg., Chi., tank car, gal.	.540	.605	.470
Heating oil, No. 2, Chi., bulk, gal.	.530	.567	.450
Heating oil, No. 2, N.Y., bulk, gal.	.503	.585	.463
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal	.510	.540	.410
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.245	.245	.245
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	94.00	89.00	76.00
Steel, No. 1 hvy., dlvd., Chi., ton	90.00	83.00	72.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.730	.735	.560
Copper, No. 2, East, wholesale buy, dlvd., lb.	.650	.650	.475
Brass, red, East, wholesale buy, dlvd., lb.	.690	.695	.520
Brass, yellow, East, wholesale buy, dlvd., lb.	.365	.365	.310
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.495	.490	.335
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.560	.555	.355
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.170
Lead, clean solids, East, wholesale buy, dlvd., lb.	.275	.275	.130
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	40.00	40.00	25.00
Paper, old corrug. box, dlr., N.Y., ton	25.00	25.00	20.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.11

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

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Office equipment: making the right connections

Compiled by Caroline Reich, associate editor

If attractive price tags are what you're after, there are plenty to be had in today's office products market. Tough competition and seemingly "runaway" technology should guarantee great deals through 1988 in all but a very few product lines. But savvy buyers know that the best price doesn't always mean the best buy—and that's where the challenge lies for those buying office supplies and equipment.

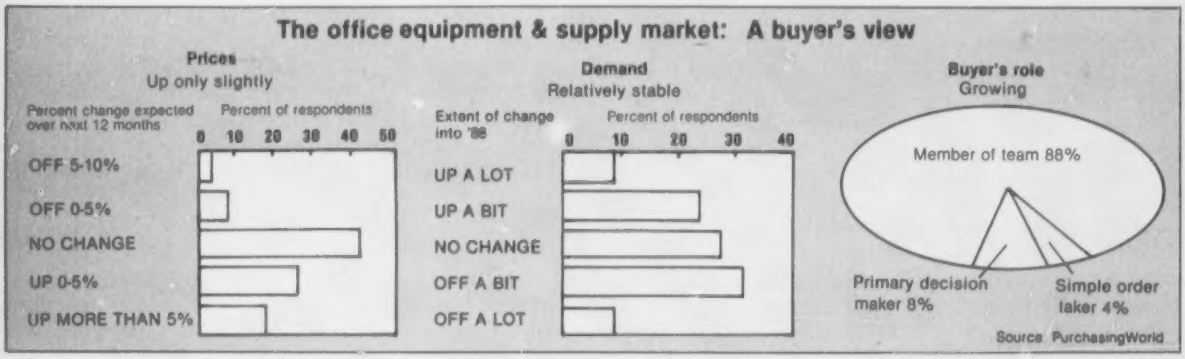
The office products market is primed for the buyer looking for such a challenge. If, for example, you are looking to buy a fax machine, you'll find there are at least a half dozen new vendors in the market this year—including Brother International, Gestetner, and Mitsubishi. And existing suppliers have expanded their lines to make the choices even tougher. Many paper buyers are hustling to sign blanket contracts for as long as 2 years to lock into good prices before a projected 1988 increase kicks in.

The point is that buyers must look much more closely at function to determine the value of the equipment and supplies they buy. They need to become more aggressive in hammering out aggressive deals with manufacturers, dealers, and distributors. According to a recent national ***PurchasingWorld*** survey, purchasing pros are rising to this challenge in some unique ways. Executive editor Bob Reichard polled a national sample of purchasing managers to find out how they viewed the economic conditions of the office market. Here's what they said:

- **Overall price trends into 1988:** While some increase in office equipment and supplies seems inevitable, the average boost over the next 12 months is put at just over 2%. And not everyone expects to be hit. More than half of the surveyed respondents still hope to hold tags at or even under levels prevailing over the past year.
- **Product-by-product price trends:** More than 75% of queried buyers believe that personal computer quotes will head downward in 1988—somewhere in the 5-10% range. Roughly half expect cuts in PC software and printers as well—and a fair number expect drops in typewriters.

Copiers and telecommunications equipment, on the other hand, are expected to remain unchanged. Only paper and office furniture should post gains—but they'll be less than 5%.

- **Overall demand into 1988:** The volume of office equipment and supply purchases should remain stable over the next 12 months. Couple this with an already oversupplied market, and a continuing buyers' market seems a sure bet.


The office equipment & supply market: A buyer's view

Source: PurchasingWorld

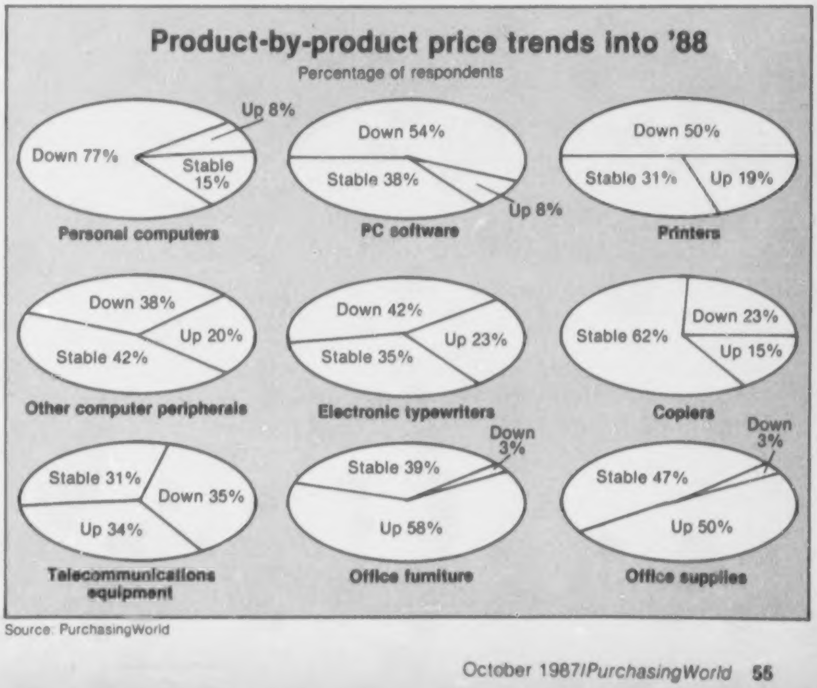
The role of purchasing

Zero in on sophisticated equipment, and you find more and more buyers now playing a key role in the decision-making process. Nine out of ten survey respondents say they are part of a team that makes the ultimate buying choice. This compares with only 70% noted just six months ago when a similar question was posed.

Why this upswing in purchasing involvement? Many respondents say that they have become involved in an effort to standardize equipment within a company to take advantage of volume discounts and assure compatibility. Purchasing, of course, has this type of expertise so it is logical that they become involved. Other problem areas particularly suited to purchasing's skills include obsolescence, proliferation of new suppliers, disposal of older generations of equipment, service and maintenance contracting, and the evaluation of new technologies.

To deal effectively with all of these problems, purchasing pros have employed a number of troubleshooting methods including the use of blanket contracts, competitive bidding, leasing arrangements, third party evaluations, and getting more educated about the new technologies involved. Other buyers have focused their efforts on forming strong maintenance and service contracts. And nearly all buyers responding to the survey have put performance monitoring programs into effect for major equipment buys.

The survey also revealed that there is an increasing emphasis on life cycle costs—total value vs. original cost alone. There seems to be less interest in "bells and whistles" that often add substantially—and unnecessarily—to overall costs. In the words of one procurement VP, "We're finally asking the right questions about what we really need in our office buys—and it's paying off in a big way." ***PW***


Product-by-product price trends into '88

Percentage of respondents

Source: PurchasingWorld

Nonferrous prices vex buyers

It's been a rough year for most nonferrous metal buyers—not because of product availability but because of price increases which have exceeded beginning-of-year expectations.

The worst seems to be over. Some tapering off in the rate of rise and a few corrections are anticipated in the months and quarters immediately ahead. But that's little solace to purchasing managers who will see the average nonferrous metal price advance about 8% this year. It's all in marked contrast to the previous three years of shaky and even declining quotes (see chart).

Moreover, this tells only part of the story. Zero in on some of the major volume metals, and this year's increases have been a lot more impressive than suggested by the above overall average.

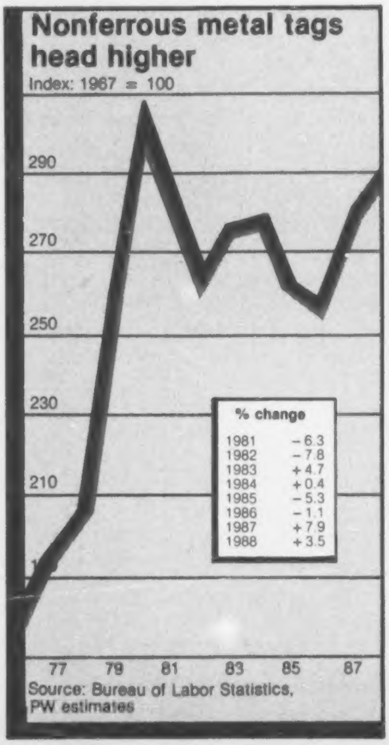
Thus lead prices at latest report were running close to double year-earlier levels. And 35-40% boosts in aluminum ingot and copper cathode over the same 12-month period can hardly be deemed moderate.

Some of the smaller-volume metals have zoomed up, too. Dealer cadmium has doubled in price since last fall. Dealer mercury, cobalt, and bismuth are all up by 70% or more over this period. And significant increases are recorded in nickel, selenium, silver, platinum, tin, and zinc.

About the only consolation—if you can call it that—is that nonferrous averages have failed to re-attain their peaks of a few years ago. The overall price index, for example, is still more than 15% under the high point hit in early 1980. And the same is true of many individual metals. Thus copper, lead, and zinc are nowhere near setting new records, although all have jumped significantly in recent months.

The big question is, why the sudden firming this year? A number of factors is probably responsible.

The industry has been able to bring supply and demand back into somewhat better balance through production cutbacks and plant slowdowns last year. Related to this has been the decline in producer inventories—plus the fact that user stocks have held at very low levels.



Nonferrous metal tags head higher

Index: 1967 = 100

% change	
1981	−6.3
1982	−7.8
1983	+4.7
1984	+0.4
1985	−5.3
1986	−1.1
1987	+7.9
1988	+3.5

Source: Bureau of Labor Statistics, PW estimates

Also driving prices up: 1) strikes or threats of strikes in the lead, zinc, and aluminum sectors, and 2) a relatively weak dollar. Additional upward impetus in the precious metal area can be traced to the shaky Mideast situation, South African racial unrest, and fears of renewed inflation.

On the other hand, rising consumption has not been much of a factor. Global use of nonferrous metals is up—but only fractionally, as the Free World's industrial countries are growing at an unimpressive 2-3% annual rate this year. The point is that this kind of growth isn't nearly enough to tax mining and smelting capacity, which in most instances remains well above current and projected needs.

This excess capacity is a basic restraint on price advances over the long pull. There are already signs that production is being beefed up, particularly in the copper and aluminum sectors. And as strikes are resolved, there could be considerably more lead and zinc available by early next year.

Couple this with expectations of very modest consumption advance, and 1988 should see considerable moderation in the current upward price trend—at least on an overall basis. ***PurchasingWorld*** equations, for example, point to only a 3-4% rise in the aggregate nonferrous metal price index next year—in line with the general U.S. inflation rate expected at that time.

But averages can be deceiving. Here's a more detailed metal-by-metal rundown—with an emphasis not only on where those metals are now, but on where they seem to be heading over the remainder of the year and into 1988:

- **Aluminum:** Prices have continued to edge up through the summer. Ingot commanded more than 80¢/lb in early September—up more than 25¢/lb from late 1986. Extrusion billet is even higher, at about 90¢/lb. Fabricated product tags have moved up substantially as well. Also indicative of strength: Producers recently shifted to a price-at-time-of-shipment policy.

Strike fears have undoubtedly played a role in the recent firming. Even more significant has been the shrinkage in Free World stocks. At latest report, global holdings were only about 1.5 million metric tons—down close to 20% from year-earlier readings. North American inventories are off an even greater 28% over this same 12-month period.

Improved supplies seem certain in the months ahead as several North American producers bring on additional production (enough to bring the U.S. operating rate up to the 87% mark). This, in turn, should put a ceiling on further price increases—particularly in view of continuing modest consumption gains. Usage on a Free World basis, for example, is expected to rise only about 2% this year (to 13.1-13.2 million metric tons)—with a similar small gain anticipated for 1988.

- **Copper:** After years of aborted rallies, it has managed to move up into the 80¢/lb range—more than 15¢/lb above 4Q 1986 readings and the highest level in four years. Another sign of strength: Inventories did not rise as they normally do over the summer. Historically, a global increase of about 50,000 metric tons is noted in the 3Q. No such gain has been reported this time around.

This year refined Free World output is expected to rise by less than 1% (to 7.543 million tons). On the other hand, refined global consumption will rise 1.4% (to 7.637 million tons). The result will be a global deficit of nearly 100,000 tons.

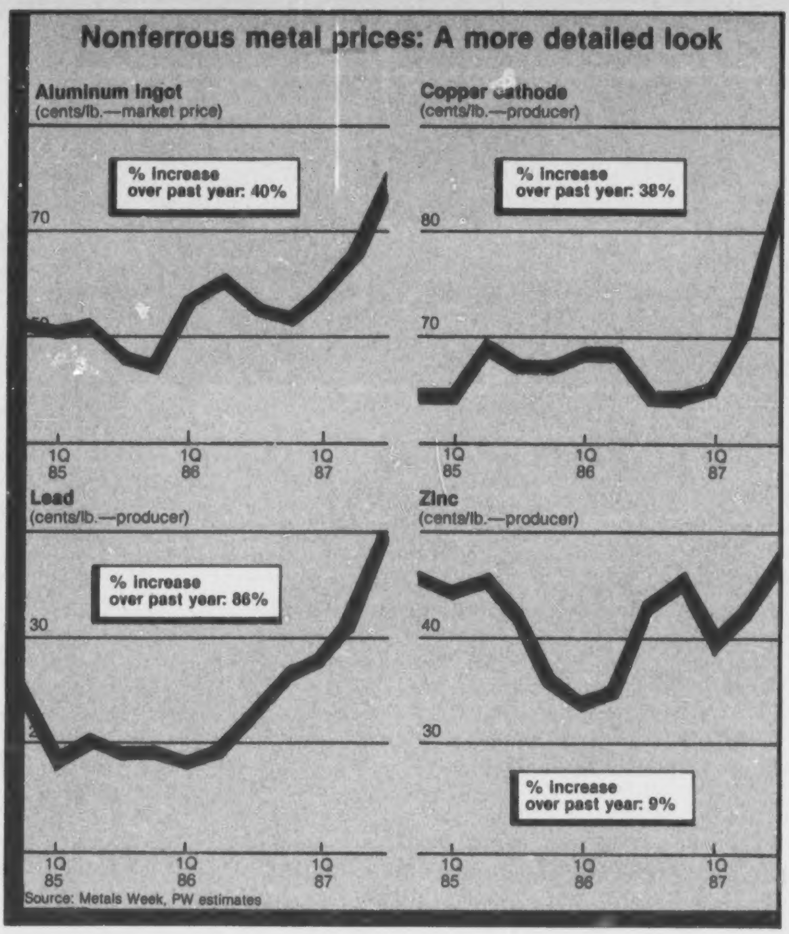
But, as in the case of aluminum, additional output (the Ok Tedi, New Guinea and Kennecott Bingham Canyon mines are now on stream) should help put a lid on further price increases. Indeed, a modest correction can't be ruled out—though any downturn is likely to be temporary and quite shallow.

- **Lead:** Recent strikes and shutdowns for facility repairs have cut into production—keeping prices up in the high 40¢+/lb range. To put this into perspective, that's nearly double the 22¢/lb average prevailing during the 3Q 1986.

Some uneasiness should begin to appear by yearend or early 1988. By then all the recent work stoppages should be history. Demand by that time should also begin to tail off seasonally. Upshot: Some modest price erosion—though the bargain-basement quotes of 1986 are unlikely to recur.

- **Zinc:** The price firming of the past spring and summer has been reversed as labor peace gradually returns to North American mines. Over the past few weeks prices have slipped back down into the low- to mid-40s range. And there's little to indicate that there will be any new upturn as the market remains fundamentally oversupplied and users keep their inventories at bare minimum levels.

Demand from the housing and auto markets has been less than sen-



Nonferrous metal prices: A more detailed look

Source: Metals Week, PW estimates

sational. Not surprising, worldwide chewup is off 3-4% this year. And on the supply side, additional shipments have begun to come in from Peru. Upshot: current lists are back where they were a year ago, though for the 3Q as a whole they are still up a bit, reflecting recent summer strength.

- **Nickel:** An increase of close to 80¢/lb since last December has brought dealer cathode up to around $2.50/lb—with other grades up commensurately. Much of the strength can be traced to surprisingly strong demand from the stainless steel market. Overall, U.S. consumption should be stronger than the 1986 level of 282 million lb.

Meantime, on the supply side, shipments from the Soviet Union have been lower than expected. Some additional Free World metal will be coming on stream over the next few months. But it's unlikely this will have any impact on prices until early next year.

- **Precious metals:** Price trends for the most part are dependent on increasingly uncertain international developments rather than supply-demand fundamentals. That's why tags have tended to advance strongly over the past few quarters. Biggest increases have been in silver, where quotes at latest report were running more than 40% ahead of late 1986 levels. Platinum shot up 30%—with gold registering a gain of nearly 20%.

Despite all these increases, supplies for industrial users will remain adequate—though prices should continue to run well above year-ago levels through the forseeable future. The platinum-group metal supply situation is particularly encouraging as South Africa continues to expand output to meet demand. Also worth noting in platinum: By 1990, as much as 200,000 oz of the metal could be recycled from used auto catalytic converters. ***PW***

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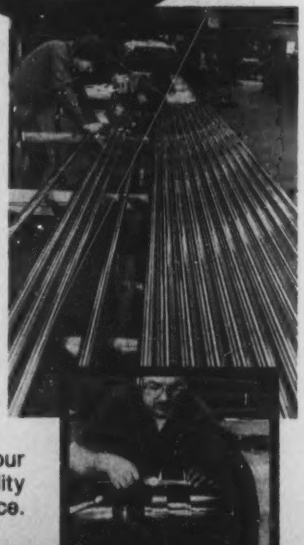

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